OCCUPATIONAL HAZARDS

THE LIBRARY OF CONGRESS SERIAL RECORD
FEB - 8 1950
Copy

FEBRUARY 1950

Display Windows Can Sell Safety

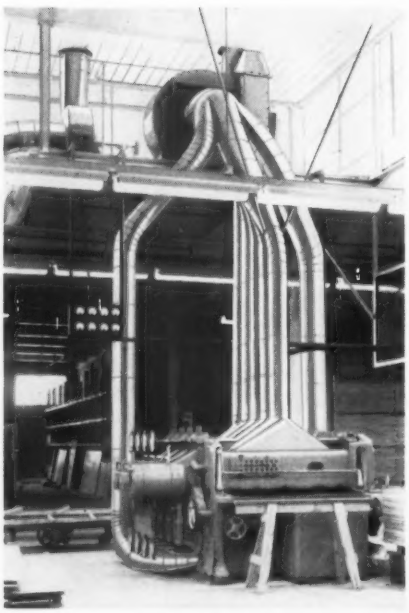
See Page 21

IN THIS ISSUE:

FLAME CUTTING AND WELDING
HOME-MADE FIRE WAGON
A NEW WEAPON IN THE COLD WAR

This Plywood Plant is.. Clean Outside and Inside

KIRK AND BLUM DUST CONTROL SYSTEM eliminates sander dust!



At the modern new plant of the United States Plywood Corporation S.C., Orangeburg, South Carolina, three fan units are used to collect dust from veneer jointers, saws and sanders; one large fan and motor unit being required for one machine, a Yates 55″ eight-drum sander.

These three fan units discharge individually to a large cyclone collector which deposits the bulk of the dust in a storage bin. The air from this cyclone is then filtered through a cloth screen dust arrester, and the cleaned air removed and discharged into the atmosphere by a fourth fan; completely eliminating the dust problem.

Kirk & Blum will be glad to give you further details of this and other installations. Write for descriptive booklet, "Dust Collecting Systems for Woodworking Plants."

THE KIRK & BLUM MFG. CO.
2802 Spring Grove Ave.
Cincinnati 25, Ohio

KIRK AND BLUM
DUST CONTROL SYSTEMS

IMPACT RESISTANCE

. . . is the final test

CESCO spectacle-type goggles, with or without sideshields, feature the exclusive Comfort-Bridge.

FREE! . . .

Send your name on company letterhead for "Safety Notes"—CESCO's handy pocket memorandum.

● CESCO Super-Safety lenses are guaranteed to equal or exceed federal specifications for optical qualities and resistance to impact. In the laboratory, CESCO cup-type safety goggles withstand severe impact tests. On the job, hundreds of thousands of CESCO goggles have proved their strength and quality in use. You find them in plants where safety standards are the highest. Add comfort and durability as additional features of CESCO goggles and you conclude: **For Safety, use CESCO.** Available with clear or filter lenses. Write for catalog showing CESCO's full line of safety goggles.

CHICAGO EYE SHIELD COMPANY

2308 Warren Blvd. • Chicago 12, Ill.

CESCO

CESCO FOR SAFETY

OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbus, Detroit, East Orange, Houston, Los Angeles, Montreal, Philadelphia, Pittsburgh, Seattle, St. Louis, St. Paul, Toledo, Tulsa

Eye HAZARD SIGNS

STONEHOUSE SIGNS
For Accident Prevention

SAFETY FIRST
WEAR GOGGLES OR USE SHIELD
SAVE YOUR EYES WEAR GOGGLES
SAFETY FIRST
WEAR YOUR GOGGLES WHEN GRINDING
NOTICE
ALL PERSONS WORKING IN THIS DEPARTMENT — MUST — WEAR GOGGLES
DANGER
WEAR GOGGLES WHEN HANDLING ACID OR SOLDER

The Glasses of Confucius

FOR centuries the Chinese have worn glasses, tho in those early days they knew nothing of the grinding of corrective lenses.

The first definite historical reference to the wearing of glasses is found in the writings of Confucius, about 500 B. C.

Marco Polo, the explorer, who visited China during the reign of Khublai Khan, in the 13th century, A. D., also states that he found aged persons in the empire wearing spectacles with tortoise frames.

.....

Those old Chinese spectacles were really GOGGLES, because they were made of plain crystal and simply shielded the eyes. So the wise old Chinese were the first to say "Wear Your Goggles."

That's the message, in many forms, which features Stonehouse "Goggles" and "Eye Hazard" Signs, shown in our catalog No. 8. It's free on request.

Stonehouse SIGNS, INC. Stonehouse Bldg. • 9th at Larimer · Denver 4, Colorado
MANUFACTURERS

"Stonehouse Signs Since 1863"

ACCIDENT PREVENTION SIGNS IN STANDARD COLORS AND DESIGNS

STOP THE COLDS THAT SLOW PRODUCTION

RESISTAB CAN DO IT!

Common colds and their complications, responsible for "40 to 50 per cent of all days lost from work,"[1] need no longer be so great an industrial health problem.

RESISTAB—the new antihistaminic—taken at the first signs of a cold *quickly aborts the symptoms,* recent controlled clinical studies have demonstrated.[2] Even when a cold has developed RESISTAB will ameliorate the symptoms.[2]

RESISTAB, when taken as directed, *is remarkably free from toxic side effects.* In clinical tests there was no evidence of epigastric distress, dizziness, sleepiness, urinary discomfort or incoordination.[2]

Keep your workers on the job by giving RESISTAB at the first signs of cold.

Dosage and Method of Use: At the first sign of a cold—running nose, dry scratchy throat or sneezing, administer immediately one RESISTAB. Follow with one tablet immediately before each meal and one at bedtime for a total of four tablets daily. Continue this therapy up to three or four days.

Patients should be advised not to exceed recommended dosage. If any drowsiness follows the use of this product patients should be advised not to drive, or to operate machinery.

Each RESISTAB contains 25 mg. thonzylamine.

At pharmacies in folders of 12 and bottles of 36 tablets.

References: 1. Cost of the Common Cold: Met. Life Ins. Co. Stat. Bull. 28:6, Nov. 1947. 2. The Prophylaxis and Treatment of the Common Cold with Neohetramine (thonzylamine hydrochloride). Ind. Med. 18:508 (Dec.) 1949.

Send for the new **Industrial Package.** It contains a roll of 500 RESISTABS individually sealed for easy clinical dispensing. This package is available ONLY on direct order through our Professional Department. It is *not* available through trade channels. The cost is only $4.25 for a package containing 500 RESISTABS.

RESISTAB is a trade mark of Bristol-Myers Company

BRISTOL-MYERS COMPANY • 19 W. 50 St. • New York 20, N. Y.

"Cuts our cleaning costs more than $1200 annually"

"Cleans floor area size of city block in 6½ hours"

"Does 4-hour cleaning job in 30 minutes"

"Cleans 55,000 sq. ft. of floor in single day"

A *Finnell* SCRUBBER-VAC

OTHERS SAVE ON LARGE-AREA SCRUBBING ... Why Not You?

Now especially, with the need for cutting costs, savings such as are possible with a *Finnell Scrubber-Vac* are well worth investigating.

With a *Finnell Scrubber-Vac,* all four of the floor-cleaning operations can be done mechanically! This combination machine applies the cleanser, scrubs, rinses if required, and picks up. With one or two operators, a *Finnell Scrubber-Vac* can do a cleaning job better in half the time it takes a crew of six to eight using separate equipment for the several operations.

The model illustrated below, for heavy duty requirements, cleans up to 8,750 sq. ft. per hour. Has new type of water valve that assures uniform flow of water ... ⅓ more powerful vacuum for more efficient pickup ... a *Finnell-developed* trouble-free clutch, affording effortless operation ... improved waterproof wiring and fewer electrical connections, simplifying the cleaning of the machine. Vacuum performs *quietly.* The machine is *self-propelled.*

Have a talk with *the nearby Finnell man.* See what *you* would save with a *Finnell Scrubber-Vac.* Incidentally, it's good to know that when you choose *Finnell Equipment,* a *Finnell* man is readily available to help train your maintenance operators in its proper use. For consultation, demonstration, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 3502 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

Everything FINNELL for Floor Care

FINNELL SYSTEM, INC.

Pioneers and Specialists in

FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES IN ALL PRINCIPAL CITIES

"THERE'S PROFIT IN PREVENTION"

OCCUPATIONAL HAZARDS

Volume 12 • No. 4

IRVING B. HEXTER
President

LESTER P. AURBACH
Vice President

EDWIN M. JOSEPH
General Manager

N. N. GOODMAN, JR.
Editor

Address all Communications to
OCCUPATIONAL HAZARDS

1240 Ontario Street
Cleveland 13, Ohio
Phone: Tower 1-0264
Teletypewriter: CV-233

SALES OFFICES

CLEVELAND 13
1240 Ontario Street

NEW YORK 17
60 East 42nd Street

CHICAGO 11
520 N. Michigan Ave.

LOS ANGELES 14
1250 Wilshire Boulevard
Room 403

Published monthly by OCCUPATIONAL HAZARDS, INC., an affiliate of INDUSTRIAL PUBLISHING CO., publishers of APPLIED HYDRAULICS, DIE CASTINGS, FLOW, INDUSTRY & WELDING, COMMERCIAL REFRIGERATION AND AIR CONDITIONING and THE TAXICAB INDUSTRY. Member, Controlled Circulation Audit, Inc. Not responsible for unsolicited editorial material.
By SUBSCRIPTION, one year, $3.00.
Single copies, 30 cents.
Canada: One year, $4.00.
Foreign: One year, $5.00.

NBP

CONTENTS FOR FEBRUARY 1950

Over The Editor's Shoulder 6
Simple Control For Chemical Use 13
A Home-Made Fire Wagon 14
Points To Remember In Flame Cutting and Welding 16
A New Weapon In The Cold War 18
Display Windows Can Sell Safety 21
Soup's On 24
Right Off The Docket 26
Coming Events 32
Accidents In The News 40
Technical File On Solvents 41
Useful Literature 43
Literature Featured In Ads 44
New Products 45
Advertisers' Index 48

NEW!

C-O-TWO

DRY CHEMICAL TYPE
FIRE EXTINGUISHER

EXCLUSIVE DESIGN
assures you of fast, positive fire protection

SELF-CONTAINED UNIT . . . rugged construction . . . no extra gadgets protruding or complicated operating parts . . . one of the most efficient, foolproof, easy-to-use fire extinguishers known . . . two convenient sizes, 20 pound capacity and 30 pound capacity.

C-O-TWO DRY CHEMICAL STAYS FREE FLOWING . . . no syphon tubes or valves within the cylinder to become clogged or inoperative . . . discharge hose and squeeze type discharge nozzle remain empty until the fire extinguisher is actuated. Inverting the fire extinguisher before using provides mechanical breakage by changing the position of the dry chemical in the cylinder. Bumping to actuate the fire extinguisher provides additional mechanical breakage as well as continuous carbon dioxide gas pressured agitation or fluffing of the dry chemical. These combined features plus a skillfully blended free flowing extinguishing agent assure you of a faster, more effective and complete discharge.

APPROVED . . . Underwriters' Laboratories, Inc. rating is B-1, C-1. C-O-TWO Dry Chemical is non-conducting, non-corrosive, non-abrasive, non-freezing and non-toxic . . . highly effective on flammable liquid and electrical fires.

RECHARGEABLE ON-THE-SCENE . . . no special tools needed . . . one piece removable top assembly leaves large unobstructed opening in the top of cylinder for refilling. C-O-TWO Dry Chemical for recharging is available in handy pre-measured moisture proof containers.

Write today for complete free information on this new, quick-acting fire extinguisher . . . no obligation.

C-O-TWO FIRE EQUIPMENT COMPANY
NEWARK 1 • NEW JERSEY
Sales and Service in the Principal Cities of United States and Canada
AFFILIATED WITH PYRENE MANUFACTURING COMPANY

Do you have any questions, theories or ideas concerning industrial health or safety? If you want to give them a good airing—send 'em along. We'll publish all space permits.

Accident In The News

Editor:

We have the December issue of O.H. which refers to a fatality sustained at Rock Hill, South Carolina, during the construction of a Celanese Corporation of America plant. The item (Accidents In The News, page 32) neglects to mention that the workman involved was a contractor's employee, and not employed by the Celanese Corporation.

We consider the information in your Accidents In The News to be very valuable; however, we feel certain that you will agree that the item could be so construed as to imply that the Celanese Corporation was at fault and permitted the use of unsafe equipment: this man was a contractor's employee, using the contractor's materials, and the Celanese Corporation had no control over the man or the work being done.

G. G. Fleming.
Safety Engineer
Celanese Corp. of America
New York City

1021 Answers

Editor:

In an effort to promote safety consciousness, items concerning safety are being disseminated to personnel of this Air Force base. Accordingly, permission is requested to reproduce excerpts from *1021 Answers To Industrial Health And Safety Problems.* The material extracted would be utilized at base level and credited to the publishers.

L. V. Mathis
Chief Warrant Officer
Perrin Air Force Base
Texas

• *Permission granted. 1021 Answers is published by Occupational Hazards, Inc. (1943). Copies are available at ten dollars.*

(Continued on page 34)

WOVEN

HY-TEST SAFETY SHOE OXFORD

H719 — Men's Brown Side woven blucher Oxford, Weather-wear sole, half-rubber heel.

This summer your workers can enjoy smart good looks, ventilated comfort and steel toe protection all in one quality-built Hy-Test oxford.

H719 is modeled after the increasingly popular woven dress shoe worn by thousands. Demand is sure to be great. Order now for March delivery.

WRITE FOR FREE CATALOG.

. . . Insure Workers' Feet in Sure Protection

with

HY-TEST ANCHOR FLANGE SAFETY SHOES

THE WORLD'S LARGEST SELLING SAFETY SHOE

HY-TEST DIV: INTERNATIONAL SHOE COMPANY • SAINT LOUIS 3, MISSOURI

NEW YORK OFFICE: 225 W. 34TH ST. • EASTERN OFFICE: MANCHESTER, N. H.

HY-TEST SAFETY SHOES

NOW!

NEW PLAN HELPS BUSINESS PROFIT
FROM A STARTLING MEDICAL DISCOVERY

You can STOP COLDS in your business with the

inhiston
TRADE MARK

COLD CONTROL PLAN

Colds are responsible for nearly half of all absences from work! Every year this "trivial" ailment bites into the American economy to the tune of several billion dollars. Whether you are a large or a small employer your company bears its share of this tremendous cost. Remember, colds mean 100 million man-days of lost production per year . . . 5 times as much as strikes . . . 20 times as much as accidents . . . colds cost *you* money!

You can now protect your business against this needless and costly loss.

Medical reports on thousands of cases have shown that most colds can be stopped by taking antihistamines at first sign of a cold. You may have read or heard of some of these studies which have been successfully conducted among industrial employees.

The *Inhiston* Cold Control Plan provides a practical and economical way to reduce colds among your employees.

Inhiston, the superior antihistamine l-phenyl-l-(2-pyridyl)-3-dimethylaminopropane, is actually twice as effective in antihistamine action as any other drug offered for public sale. And, *Inhiston* is safe when used as directed.

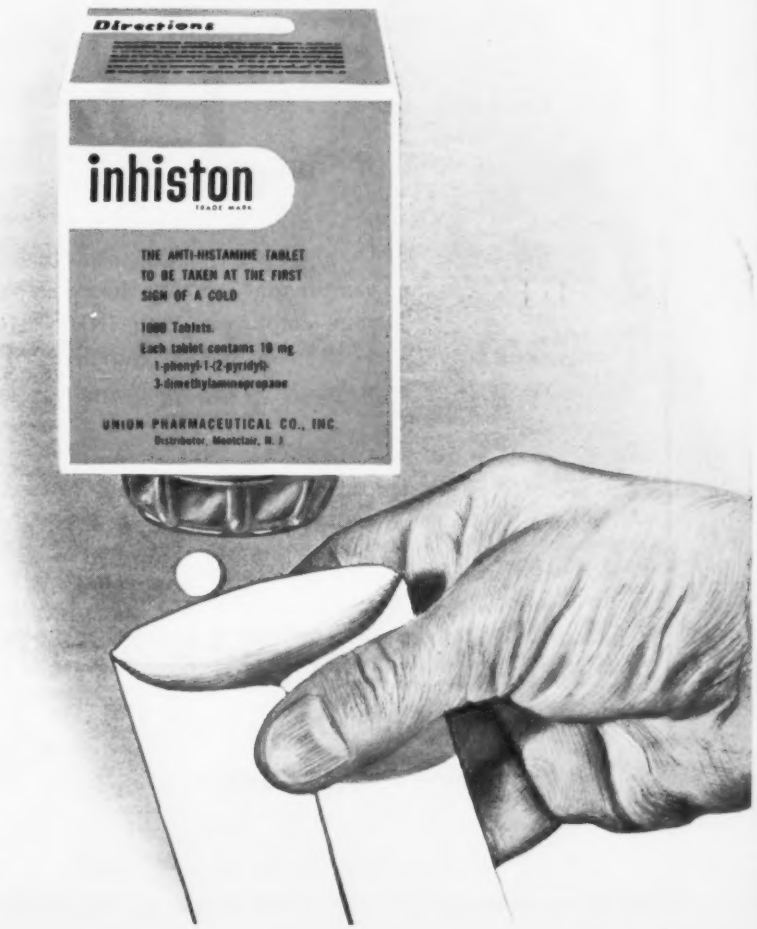
For best results *Inhiston* must be readily available at first sign of a cold. The *Inhiston* Cold Control Plan is designed to keep the tablets accessible to your employees and to constantly remind them to take *Inhiston* at the first sneeze or sniffle. The attractive *Inhiston* unit containing 1000 tablets can be conveniently mounted near drinking fountains or in the dispensary. With the purchase of each unit the *Inhiston* Cold Control Kit is available free upon request. This kit contains sanitary drinking cups printed with dosage directions, bulletin board posters and stickers, plus the *Inhiston* Cold Control Manual.

Install the *Inhiston* Cold Control Plan in your business now—decrease absenteeism and increase productivity.

On a hard cash basis you will reap many times over your small investment in the *Inhiston* Cold Control Plan. Remember, colds cost you money . . . so call your drug supplier and order *Inhiston* today.

Write for your free copy of the Inhiston Cold Control Manual on your business letterhead.

UNION PHARMACEUTICAL COMPANY, INC.
MONTCLAIR, NEW JERSEY



WE ARE PROUD TO BE THE FIRST

TO INTRODUCE TO INDUSTRY . . .

The INHISTON *Cold Control Plan*

You can prevent loss time due to colds in your plant by providing your employees with INHISTON — the anti-histamine tablet to stop colds. Supplied in the new, expendable dispenser.

WRITE FOR YOUR FREE COPY OF THE "INHISTON COLD CONTROL PLAN" MANUAL

DAVIS EMERGENCY EQUIPMENT CO., INC.

45 Halleck St. Newark 4, N. J.

Offices in:

Melrose, Mass • Buffalo • Chicago • Houston • San Francisco

INDUSTRIAL EYE ACCIDENT **COSTS** **UP** 78½% SINCE 1939

Profits Go Up... Operating Costs Go Down...

when you eliminate High Eye Accident Costs from what you make and sell!

High eye accident costs can affect your operations adversely two ways: (1) They represent an unnecessary cost that inflates your selling price and hence cuts your volume (2) They lower efficiency through increased unproductive time, idle machine charges, replacing key men with substitutes and by impaired worker morale. All this in addition to the direct costs for first aid and medical care.

Yet unlike other high costs that plague management today–*these can be cut.* How? By establishing an AO Eye Protection Program which can pay for itself in less than six months' time. Your AO Safety Representative can prove with case histories that an AO Program *works* — that goggles costing about $2.30 can save sums up to $44,000 annually! Ask him to call.

FACTS TO REMEMBER — Eye accidents cost industry over $5 per employed worker per year — over $328 in compensation per injured man — are 98% preventable.

American Optical COMPANY
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities

NEW SAFETY SHOE CATALOG

READY NOW!

- **8 New Styles in Famous Double-Duty "Executives".** *Handsome dress-shoe styling with dependable Lehigh toe protection. Makes ONE pair do the work of TWO!*
- ***New "Sock-Saver" Feature:*** *smooth leather toe-lining prevents holing-through of sock toes . . . another advantage in choosing Lehighs!*
- ***Seamless Back*** *—many styles with this finer quality construction that eliminates chafing at heel. No stitching in back that can tear open.*
- ***New Women's Loafer Styles*** *with more comfortable, lower heel . . . easy-flexing moccasin-toe.*
- ***36 Different Leather Styles*** *to combat almost every type of industrial foot hazard . . . Oil Fighters, Electrical Hazard shoe, Foundry shoe, Mine shoes.*
- ***8 Rubber Safety Boots*** *for indoor and outdoor wear . . . Neoprene-sprayed to resist corrosive materials.*
- ***Buyer's Guide*** *— Lehigh's famous "bible" for safety shoe buyers tells how to specify shoes for longest wear, maximum protection.*

attention all Safety Directors and Purchasing Agents!
You'll want to know all about these new and advanced safety shoe designs:

Please send me catalog #15 23

NAME.....

TITLE.....

COMPANY.....

ADDRESS.....

CITY.....STATE.....

Clip and mail this Coupon NOW!

LEHIGH
Division of the ENDICOTT JOHNSON CORPORATION
SAFETY SHOE COMPANY
ALLENTOWN, PA.

Is it toxic? Will it explode? A three-man committee finds out, applies the facts to a . . .

SIMPLE CONTROL for CHEMICAL USE

A LARGE part of the danger present in the use of chemicals in fabricating plants is removed if that use is restricted to approved practices. Recognizing this fact, Harrison Radiator Division of General Motors Corporation set out some years ago to standardize the ways and means by which every chemical in its plants is used. Involved was not only the question of various chemicals' affects on worker health and on direct personal safety, but also the problem of preventing the use of chemicals and chemical compounds in a manner which might create fire hazards.

Under the broad title Chemicals and Chemical Compounds are included lacquers, paints, thinners, degreasing agents, cutting compounds, soaps, cleansers and literally every type of chemically active compound which might be introduced into the Harrison plants. To insure that no dangerous compound is introduced for any purpose without that danger being recognized and safeguards taken, a three-man Chemical Safety Committee was established, consisting of the chief chemist (chairman), the company medical director and the safety manager.

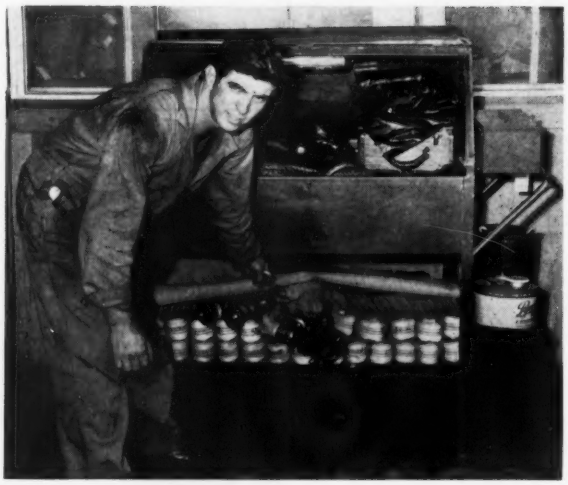
This committee regulates the application and handling of *all* chemicals which Harrison uses. Even before a sample of any new chemical or chemical compound is brought in for experimental—or any other—use, it must be submitted to the committee for authority to use it. The committee then considers its intended use or uses and determines when, where and how it may be handled. For some materials the committee's authorization is very broad and places no restrictions on use; but on others it is quite specific, stating the exact purpose for which the chemical is intended and the exact conditions under which use will be permitted.

Here is how the method works in practice. Department supervisors who wish to use a new material, file a request to do so with the committee: this is done before any of the chemical is brought into the plant, even for testing or experimental purposes. The request details the type of use for which the chemical is intended. The committee then reviews the properties of the compound and prescribes specific methods for its use, handling and storage. Committee members act on the subject within their own fields of control: the chief chemist checks adherence to process specifications in the use of formulas and compounds; the medical director exercises supervision to insure adequate health protection; the safety manager specifies procedures for safe handling and storage.

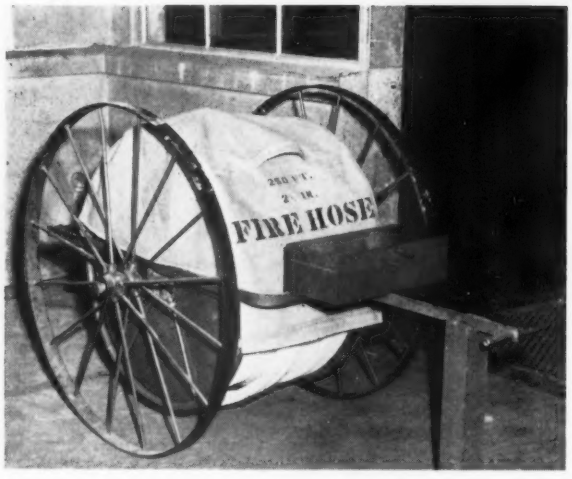
A Chemical Use Authority is then issued by the committee, signed by all three members. The authority states clearly 1) instructions for receiving, handling and storing 2) the purposes for which use is authorized 3) conditions under which use is permitted. Where there are no specific requirements under one of these categories, that fact is stated to avoid misunderstanding. Modifications of this authority are issued on a complete new form, so that a single reference gives complete information on each chemical or compound.

Only on receipt of such authority may the purchas-

(Continued on page 33)



STOCK CART becomes an efficient fire wagon, when modified as explained in text. Worker shows how hose can be cleared for use instantly by grasping siamese fitting strap. Protective equipment and tools are stored in top shelf and boxes at end of wagon. Hose wagon (below) keeps hose clean, dry with salvage canvas cover: lacquered cardboard sides prevent cutting hose when unreeling.



By E. J. LOWDER
Fire Chief, Lincoln-Mercury Plant,
Los Angeles

A HOME-MADE FIRE WAGON

THIS writer read the article in July (1949) Occupational Hazards on plant fire protection (page 16) and found it to be quite thorough and informative. We have tried to follow similar ideas in setting up fire protection methods in our new plant.

We seem to have, however, a difference of opinion on one point: the uses of portable fire equipment units. We find that most fires which have burned long enough for an alarm to be turned in, and subsequent response by firemen, probably will have gained such headway as to be beyond the limits of first aid extinguishers; so we have tried to equip our wagons completely enough to cope with almost any blaze, regardless of time factor or type of fire.

Our emergency wagon is a converted stock handler's cart. It is covered with sheet metal and fitted so that gear is readily accessible (see cut). A hose assembly is probably the most valuable item on the unit: this consists of a siamese fitting, 2½" to two 1½" outlets, with a separate shut-off on each. Each outlet is attached to 100 feet of 1½" rubber-lined hose carrying a fog nozzle. The nozzle controls both stream, from fog to straight flow, and volume, from ten to 100 gallons per minute.

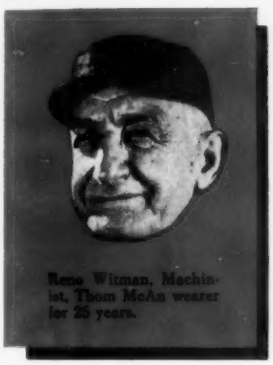
This takes up the bottom half of the cart, fitting compactly so that the siamese fitting is in the middle. By grasping a strap attached to the fitting and running 25 or 30 feet away from the cart, the operator clears the hose for use. It then takes only a few seconds to connect the unit.

For class B fires the unit carries a high expansion foam unit which we have found to be simple in operation and very effective. To operate, it is necessary only to attach the playpipe to a 1½" hose, screw a siphon tube in place, turn water into the line and place the siphon tube into a two-gallon foam solution container. This immediately provides a foam blanket at the rate of 600 g.p.m. To play safe, we store extra containers of foam solution near various fire hazards.

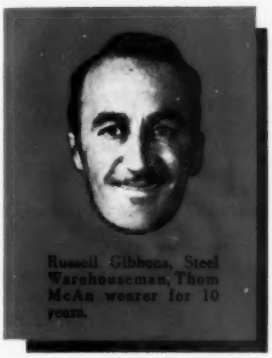
The other innovation is a very simple and inexpensive method of protecting our fire hose (see cut). Carts carrying 2½" hose are covered with canvas, made of salvage material: the side panels of the reel are lacquered cardboard to prevent damaging the hose while it is being un-

(Continued on page 30)

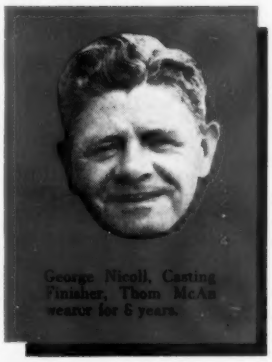
Thom McAn, the Safety Shoe men wear willingly!



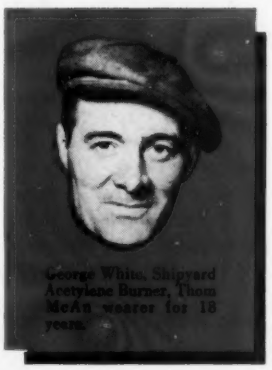
Reno Witman, Machinist, Thom McAn wearer for 25 years.



Russell Gibbons, Steel Warehouseman, Thom McAn wearer for 10 years.



George Nicoll, Casting Finisher, Thom McAn wearer for 6 years.

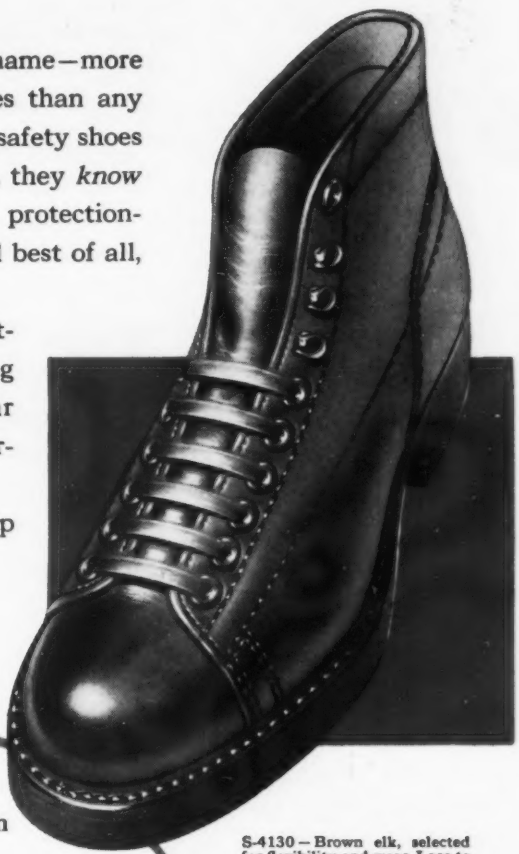


George White, Shipyard Acetylene Burner, Thom McAn wearer for 18 years.

Men *know* the Thom McAn name—more men wear Thom McAn shoes than any other brand! And when their safety shoes bear the same familiar name, they *know* it means clean-cut looks . . . protection-plus . . . more mileage . . . and best of all, *more shoe for their money!*

This overwhelming acceptance of Thom McAn goes a long way in getting men to wear safety shoes. And, more important, to *keep* wearing them.

And *that's* what helps keep safety records safe.



S-4130—Brown elk, selected for flexibility and wear. Lace to the toe blucher, specially cut at top for maximum easy-walking comfort. Long wearing, oil resistant sole and heel.

SOLD 2 WAYS

1. Stocked for your men in Thom McAn stores.
2. Sold direct to plants.

Details of this service, plus information on the 4-way employee purchase plan, and the Thom McAn safety shoe features, should all be on your desk. Just write us and we'll see that they get there.

THOM McAN SAFETY SHOE DIVISION
25 West 43rd Street, New York 18, N. Y.

Thom McAn
SAFETY SHOES

A DIVISION OF MELVILLE SHOE CORPORATION

SPARKS retain enough heat to ignite combustible materials even at this distance.

Points to remember in . . .

FLAME CUTTING AND WELDING

By J. I. BANASH
Consulting Engineer,
International Acetylene Association

IT is not enough for a safety supervisor to know *how* to protect himself and his associates. He must also know the *reasons* for safe practices and how to teach these reasons to those for whose safety he is responsible. Keep in mind that the average employee is not interested in theories: it is up to the safety supervisor to get across the practical facts and their application. This is important because the employee is the one who suffers the injuries and causes the fires which may destroy the whole plant. The safety message must be brought to him in a way that he can understand and use.

Practically all safety work in oxy-acetylene application deals with three basic factors: pressure, chemistry and flame. Let's look at them one at a time.

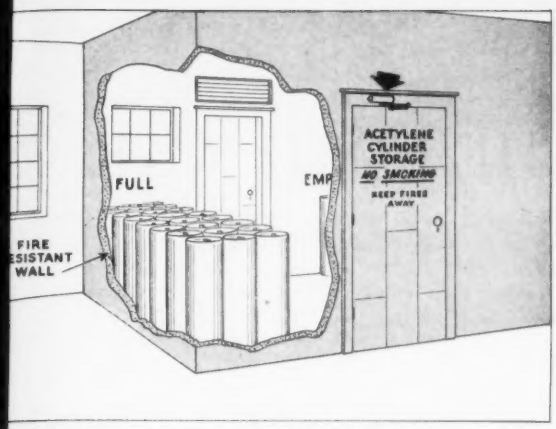
Pressure Precautions

Whenever gases are used, pressures of varying degrees must be considered. In oxygen cylinders the pressure is very high—2200 lbs. per sq. inch at 70 deg. F. The heavy, cumbersome cylinders call for safeguards in handling and storage. Determine first that the cylinder has been accepted for use by the Interstate Commerce Commission. This acceptance, and the date of the last test—ICC requires that oxygen cylinders be checked every five years—are stamped on the cylinder. The re-test markings are not required on acetylene cylinders. On account of their weight, oxygen cylinders must be handled with reasonable care. They should not be dragged across floors but should be slightly tilted and rolled on edge. When in use they should be tied or braced in position to prevent their being knocked over. A hook should be provided for the hose and blowpipe.

After a cylinder is received and ready for use, the gas must be brought down to a workable pressure in the pipelines or hoses to apparatus. An approved type of regulator must be carefully attached. *No cylinder should ever be connected directly to pipelines or equipment.* The shut-off valves are distinctly not regulating valves. The regulator serves another function in maintaining a constant working pressure. Without it the pressure would vary as the cylinder is emptied.

Before the regulator is attached, the cylinder valve should be opened slightly and closed again. This is called *cracking* the valve and its purpose is to blow out any dust that may have accumulated and prevent free passage into the line.

Oxygen and acetylene cylinders should be stored separately, and the protective cap over the valve should



ORAGE facilities for oxygen and acetylene should be sepa-e: full and empty cylinders are kept apart too. Fire door ens out and has self-closure. Other points to watch: ventila-n, firewalls, no smoking warning.

be in place except during actual use. No cylinders should ever be dropped, knocked over or exposed to flame. Storage rooms should be well ventilated, provided with fire doors that open out. A satisfactory set-up is pictured above.

Chemical Considerations

The flame produced by oxygen and acetylene is about as hot as any produced by man. The fumes which may be produced are only one of the possible dangers in their use.

Care must be taken to keep oxygen away from materials which form harmful combinations with it. First in importance and frequency of hazard are oil and grease. As a result of high pressure oxygen striking against even a thin film of oil, a most rapid and violent combustion may result; and as you know, nearly anything will burn in the presence of high pressure oxygen. Warnings against the use of oil are always printed on the high pressure gauge and should be contained in all safety regulations.

It is not enough to *think* that there is no oil involved: you must *be sure* of it. For instance, it may be thought that a little oil or grease on the outside of a cylinder will do no harm. Ordinarily, this may be so; but a workman's hand or glove can easily take up some of the oil. Then, the cylinder may become exhausted and he will want to substitute a fresh one. In removing the regulator, or attaching it to the new cylinder, he may get a film of oil on the connection. When the valve is opened, the inrushing high pressure oxygen might cause ignition—all as a result of an oil spot on the outside of a cylinder.

Remember that *there is no need to oil any part of oxy-acetylene apparatus.* If it does not work properly or seems to require lubrication, return it to the repair shop or to the manufacturer.

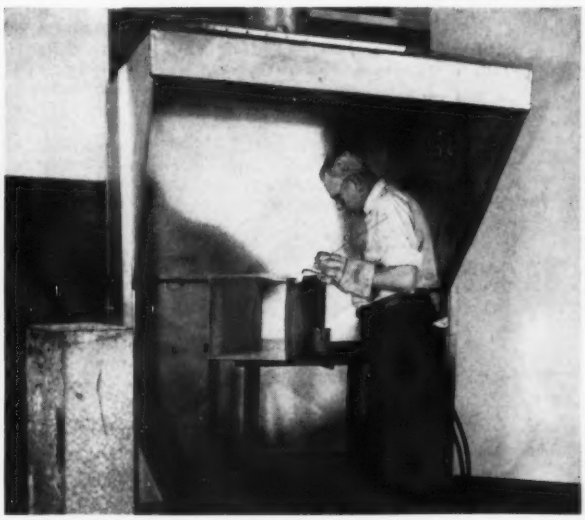
Acetylene is classified as a simple asphyxiant and is therefore considered a non-poisonous gas. Any impurities in it, as made in this country from calcium carbide, appear in such minute quantities that they may be considered negligible; and experience over the years has proven this. Too much acetylene in a room will displace the air and there will not be enough oxygen in the atmosphere to support life. Of course there is always the danger of ignition, but acetylene is not a poison.

Again *we must emphasize the importance of not using acetylene except in ICC approved cylinders and not at pressures above 15 lbs. per sq. inch.* Under some conditions of heat and pressure beyond this point, decomposition may set in even without the presence of oxygen. That is why all rules should carry 15 lbs. per

(Continued on page 38)

Sparks and fumes are major oxy-acetylene threats

CUTTING is most dangerous use, according to fire statistics. Device should be provided to catch sparks (but demonstrator should keep away from wood floors!). Note collar buttoned, goggles and gloves to protect operator.



HOOD draws off harmful fumes. Most trouble starts when cutting and welding is done in temporary conditions. Helmet is not usually needed for acetylene work, which unlike arc-welding, creates few ultra-violet rays.

A NEW WEAPON IN THE COLD WAR

An OCCUPATIONAL HAZARDS Report

September 2, 1949 may well be an important date to future medical historians. On that date the Food and Drug Administration released for over-the-counter sale the first of the antihistaminic drugs, newest proffered remedy for the common cold. The antihistamines apply a new approach to an age-old, universal problem. This is as interesting to scientists as the publicity splash they have aroused is to the consumer.

Probably the most exciting thing that has happened to the neighborhood drug store since soda fountains were introduced — snifflers bought a million dollars worth of one brand in its first month of production — antihistamines have been the subject of a good deal of praise, controversy and resultant misinformation.

OCCUPATIONAL HAZARDS has made every effort to determine the facts in order to bring industrial safety and hygiene men the story: here is our report on the history of antihistaminic drugs to date.

WHY all the excitement over the sniffles? They represent, in all probability, industry's greatest lost time cause: you yourself, if you are an average, usually healthy individual, were made miserable by at least three colds last year. Five hundred million colds are the nation's average yearly crop. The direct dollar and cents cost of these bouts with nose drops and handkerchief is nearly $1,250,000,000. This bill is split about evenly between industry, in production losses due to absenteeism and labor turnover; workers, in lost wages; and medical-medicine charges. 40 to 60 per cent of all absenteeism, according to the U. S. Public Health Service, is attributable to them, 20 times the production loss caused by all accidents, five times the nation's strike loss.

That much we can measure and label. But what about the indirect cost of colds to industry and workers? Who can assess the losses or measure the dangers due to men working while fighting a cold? Bleary vision, headaches, impaired breathing and other common cold symptoms sap worker energy and efficiency, lay the groundwork for accidents and absenteeism. Many an accident report could list honestly the cause of a smashed hand or ruined machine as "cold" instead of "negligence."

Colds may lead to more serious trouble. Pneumonia, sinusitus, bronchitis and other organic ailments, frequently cold outgrowths, are billed separately to industry and to the nation's welfare. The indirect, unmeasurable costs of colds dwarf the billion and a quarter dollars that can be pegged to absenteeism, wages and medication, making the common wheezes, coughs and sniffles a safety threat more deadly than unguarded machinery. Small wonder then, that antihistamines have aroused such a furor of interest and controversy.

What Makes A Cold?

In an age of medical miracles, this ordinary infancy-to-senility malady is pretty much of a puzzle. It is a virus infection, most experts agreed, but what kind, or kinds, of virus seemed to be an unanswerable question. The idea that allergies are the cold's basis, or at least that there is an allergic factor present, has caused increased study during the last ten years.

Earlier studies of allergies have shown evidence that the major cause of allergy symptoms is the activity of *histamine*, a chemical found in all our body tissues. How histamine is formed in the body and what its normal functions are is still an unsolved problem, but this much is known: when it acts it causes tightness in the chest muscles, makes an acid stomach, starts nasal discharge, producing the symptoms peculiar to hay fever and other allergies, as well as to head colds.

Analysis of nasal secretions from cold sufferers showed the presence of histamine, further indicating a

link between this substance and the cold. What remained to be done was to find drugs that would stop histamine's actions—*anti-histaminic* substances. Various types of chemicals will short-stop histamine's effects: the trouble was that most of them also produce harmful effects of their own.

Confirmation of the believed connection between colds and histamine came from the Navy. At Great Lakes, Illinois, Naval Hospital, in 1947, Captain John M. Brewster was testing antihistamines in the treatment of allergies, when one patient caught cold. The cold was apparently stopped short by the drug (benadryl.) Further tests helped substantiate this finding: the drug did not, however, prevent secondary infections once a cold had gotten a good start. Spurred on by these findings, searchers concentrated on finding antihistaminics that would do the desired job and nothing more.

What Have Tests Shown?

The cold season lasts from September 15 to April 15. Using the first half of this 1948 period, Dr. H. G. Murray tested the effects of antihistamines on 494 patients at the Dennison Mfg. Co. The results were good enough for Murray to label the drug (pyrabenzamine) the most successful for cold relief ever used at the plant. Here is what they showed:

Symptoms stopped within 24 hours.....110
Symptoms stopped within 48 to 72 hours 204
Symptoms greatly relieved 83
Symptoms not alleviated 97

Of the 97 cases which were not helped by the drug, 22 reported various side effects: drowsiness, dizziness, nausea, etc. The search continued for drugs which could be placed on the open market.

The Bastian-Blessing Co., Chicago, ran similar tests in 1948 with an added comparative twist. Records were kept on 166 cold cases to measure the effectiveness of an antihistamine (chlorothen citrate) and aspirin in cold treatment. Administered during the same period, the antihistamine was found to clear up colds completely in an average of 2.7 days; while the aspirin took an average of 5.3 days, nearly twice as long, to do the job.

Last year Captain Brewster released reports on a full scale, seven-month test at Great Lakes. All personnel were told to report to one of three treatment stations at the *first sign* of a cold. His report tabulates 572 cases. Five different antihistamines were used, plus a conventional cold remedy (codeine sulphate) for comparison purposes. Originally intended to show whether antihistamines would completely stop colds, the study was altered in method slightly as it proved impossible to catch most cases soon enough: more than 75 per cent of the patients waited 48 hours or more before requesting treatment. The major importance of the time factor can be seen in Brewster's findings which indicate a direct relationship between the speed with which incipient colds are treated and the effectiveness of antihistaminic treatment. The results were:

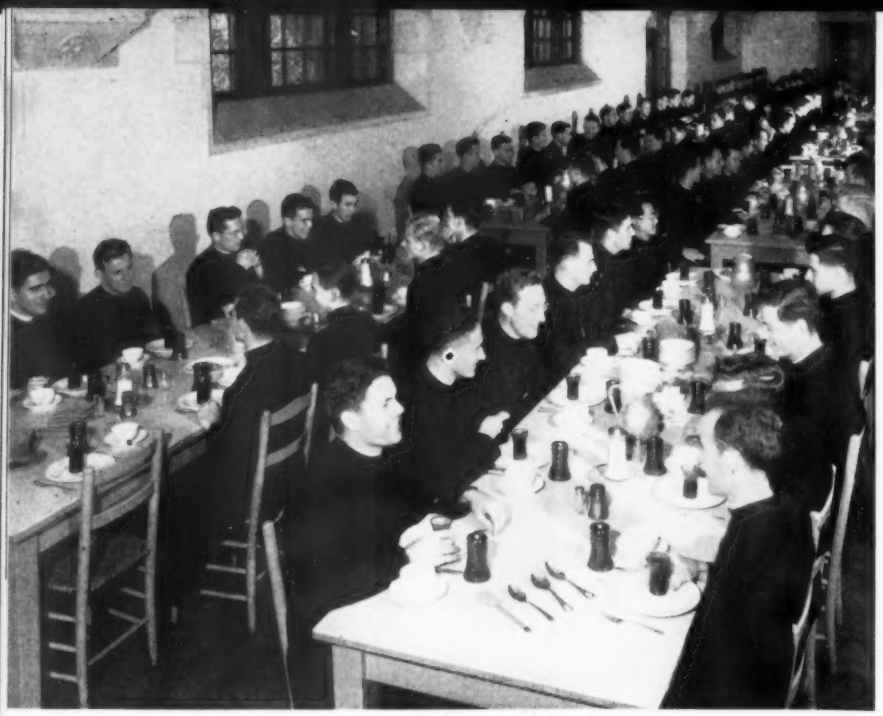
Time between onset of cold and start of treatment:	*% completely relieved Within 24 hours:*
1 hour	90
2 hours	87
6 hours	74
12 hours	70

Superiority over the conventional remedy was also demonstrated: of the colds treated with codeine within six hours after the onset, 42 per cent were cleared up within 24 hours; while 31 per cent were stopped when treatment was started within 12 hours. The fact that three-fourths of the patients waited two days before reporting for free treatment showed the need for control methods, possibly through educational programs, to get workers in for antihistaminic dosage as soon as possible when cold symptoms start.

One way to overcome this timing difficulty is to start medication before colds start, as a preventive measure. Medical Director H. E. Tebrock administered four

SYLVANIA TESTS on 1745 workers showed preventive and curative value of antihistamines to industry. Plant nurse Rita Kirby dispenses tablet (above) to cold sufferer, checks later (below) for follow-up information on effects. Side effect incidence was 2.5%.

All photos courtesy The Anahist Co.



MARYKNOLL SEMINARY students underwent tests during normal cold season to check preventive action of drug, administered at mealtime. Note tablet on overturned water glass at each place.

Tests show cold preventing and relieving effects of the new drugs

25 milligram doses of an antihistaminic drug (thonzylamine hydrochloride, neohetramine) daily to 782 employees of Sylvania Electric Products, Inc.'s plant to test the value of preventive treatment. Over a three month period only 22.8 per cent of this group came down with colds as compared with 65 percent cold incidence in a non-treated group.

As a curative application, the drug helped 83 per cent of 963 cold sufferers at Sylvania during the same period. 17 per cent received no benefit from the treatment.

Similar work in testing the preventive use of antihistamines was done by Drs. J. J. Arminio and C. C. Sweet at Maryknoll Seminary and Sing Sing prison. The Maryknoll research was conducted on 600 men and women, with the results shown in the table below:

No. Treated	*Medication*	*Cold Free*	*Cold Stages*		
			1	*2*	*3*
300	none	20%	0%	21%	59%
100	3 per day	92%	6%	1%	1%
100	2 per day	90%	7%	0%	3%
100	1 per day	83%	5%	0%	12%

The comparison or control group of 300 who received no medication shows the normal cold incidence during the test period. 80 per cent caught colds and all progressed through the second or third (communicable) stages before being stopped. The preventive record of antihistaminic treatment—in 25 milligram doses—at the same time shows that of the small percentage who caught colds, most were arrested in the early stages.

What About Side Effects?

No drug affects everyone in the same way. Even treatment of colds with aspirin had to be discontinued on 13.5 per cent of the patients in a recent test who complained of gastro-intestinal disturbances and dizziness. Dr. Tebrock reports that 2.5 per cent of the 1745 cases he observed at Sylvania revealed side effects. 782 of these cases received the dosage daily for the several months' duration of the cold preventive test. These included drowsiness, headaches, nausea and skin rash. It is important to note, however, that the side effects reported did not interfere with workers' ability to perform their routine duties.

Clinical technicians realize that mental attitudes have a lot to do with physical reactions to medication. Control groups—who are given no medication in order to check the comparative effect of dosage on others—showed or reported similar side effects to the group which was actually getting antihistaminic treatment. Captain Brewster reports, in his latest tests, that 10 per cent of a control group reported side effects. These men were being "treated" with pills commonly used by physicians to satisfy patients' craving for medication: they contained no drugs whatsoever.

What Do The Authorities Say?

The Food and Drug Administration has released several antihistaminic drugs (various trade names are used for the same drug by different manufacturers) for over-the-counter sale in strengths which it believes to be harmless. This does not, of course, indicate a FDA endorsement of the products. According to Dr. E. E. Nelson, head of FDA's New Drugs Division: "When we permit sale of a drug it simply means that we find no reason to believe it is not safe when taken according to the directions on the label for the specific ailment described on the label." All packages of the drugs must comply with certain requirements: these include dosage instructions, and a description of the chemical

contents. Typically, a package or inside pamphlet message states that 1) the time factor is vitally important in getting the best results in antihistamine use 2) the drug will relieve cold symptoms 3) specified dosages—usually one tablet at the first sign of a cold and after meals for three days, a total of 12 tablets—should not be exceeded.

The medical profession has been understandably slow in voicing approval of the drugs. Dr. Austin Smith, editor of the *Journal of the American Medical Association,* has warned against "indiscriminate use of these drugs," which it is well to remember when taking any medication. Basis of AMA's reticence to O.K. the antihistamines is the absence, according to its committee on pharmacy and chemistry, of any evidence that they are not harmful when taken for long periods of time.

The National Better Business Bureau has released a list of Do's and Don'ts for advertising copy which reflects its attitude on the antihistamines. First is the warning that recommended use should be limited to head colds, *as chest colds and other respiratory ailments were not included in the testing that has been done.* Likewise, statements that the drugs will kill, cure, banish or end colds are not true: the cold virus remains. The mass of evidence demonstrates that they will, however, arrest and relieve cold symptoms in short order.

What Does This Mean To Industry?

The tests described show that the antihistamines clear up a large percentage of cold symptoms quickly, preventing in most cases, or minimizing, absenteeism. Cold contagion potentials are also greatly limited. As preventive medicine, antihistamines have resulted in a large number of cold-free workers during the normal cold season. While side effects are infrequent, they should not be ignored. Workers being treated should be warned of the possible drowsy or light-headed results they may produce. Several of the testing companies kept coffee available for those who are affected.

The very newness of antihistaminic drugs prevents final evaluation of them. New tests are being conducted, new brands are being readied for the market: The foregoing are the facts as we have been able to determine them. We will certainly hear a great deal more about antihistamines.

Display Windows Can Sell Safety

DISPLAY windows are valuable salesmen for any retail merchandiser; they are the "stoppers," who first catch the eye, divert the attention and capture the interest of potential customers. The display window helps sell by starting a softening-up process before the customer has even entered the store, effecting a subtle transfer from disinterested passer-by to cash-and-carry customer.

Selling safety is no different, in this respect, than selling shoes or fishing tackle, according to the experience of Union Bag & Paper Corporation's plant at Savannah, Georgia. Well planned window displays have been instrumental in making workers safety conscious, and maintaining this interest is half the battle to high safety standards. Not only do the windows create spectator interest, but they have even caused lookers to join in and help with ideas and materials to keep them furnished with new and clever selling displays.

Civic groups and local institutions were quick to back up the Union effort too, by lending props (see below) and materials. Thanks to this help, window costs are negligible. The results—tremendous.

MONKEYSHINES have no place in working safety, this visitor from the local zoo demonstrates. Other institutions cooperated closely in adding new twists to displays. Crowd gives evidence of successful appeal.

Rules for window salesmanship are simple

Union Bag formula for results: attention-catching ideas with safety slant added

First consideration for safety windows is location. Displays must be in position to do the job. The window pictured on these pages is fortunately spotted where all workers must pass it as they enter the plant. Main entrances to plant grounds are good locations: be sure, however, that resulting traffic about them doesn't create another safety problem.

Basis for strong window salesmanship is an eye-catching idea. The safety angle can be added later: the main thing, and the toughest chore, is to keep pulling out attention getters. A variety of appeals can be used to stimulate this interest. Weird, a bit frightening, displays, like the grim reaper, are one way.

Another traffic stopper is something a little hard to believe—the paper supporting more than 1000 pounds, for example. Only after workers have gazed in wonderment do they realize the application of the "straight pull" principle to their own physical work. Audience participation is a sure seller every time. The dice game—they're loaded—with cord attached for onlookers to prove that the game can't be beaten, put over a strong safety message.

Other sound appeals utilized to hold interest at Union Bag are based on contests, slogans, workers' homes. Guessing contest ("How many beans in the jar?") gave winner as many half-dollars as he could scoop up with both hands. The stunt was performed, of course, in the display window.

EERIE IDEA catches attention, puts safety sales message across with force. Similar approach showed living room scene with empty picture frame, caption: "A black picture painted by an accident."

PARTICIPATION opportunity brings workers in close to study window. Moral: like loaded dice, failure to observe safety rules makes you a loser. A guessing contest, with winner taking home handfuls of half dollars, also appealed to audience participation interest.

DEMONSTRATION of paper's strength, when correctly handled, shows that the same rules are true of the human body. Board at left applies this rule to muscles used in lifting.

He didn't forget . . .

He just took a chance!

When workers risk their eyes, with disastrous results to both themselves and the company alike, it's time to look into the cause of unsafe practices.

Goggle Style TAW51

WILLSON answers the problem of getting safety equipment worn by designing the utmost comfort into their entire line of eye and respiratory protective devices. The goggles illustrated have eye-cups that are molded to fit the bony structure around the eyes. The chain bridge and elastic headband are adjustable for comfortable fit. And the Super-Tough* lenses meet or exceed Federal Specifications for optical clarity as well as impact resistance.

NEW CATALOG

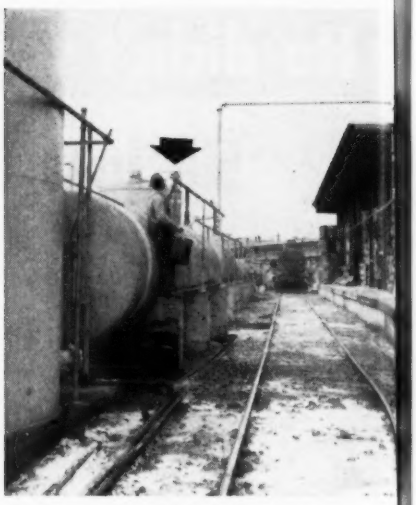
In addition to product information, it contains information on safety glass, filter glass, respiratory hazards, etc., which will help you select proper safety equipment to meet specific hazards. Send for it!

WILLSON*

"Established 1870"

T. M. Reg. U. S. Patent Office

WILLSON PRODUCTS, INC., 205 WASHINGTON STREET, READING, PENNA.



HEAT is applied to detector (arrow) as t
starts. Foam from earlier test has practic
disappeared.

SOUP'S ON

The first automatic industrial application of the Na bean agent blankets a problem th f

SCHENECTADY Varnish Company's chain of fire protection had a weak link—its railroad siding and tank car unloading dock. Bounded on one side by the plant wall and on the other by a row of liquid storage tanks, the potential danger area was 450 feet long, 25 to 40 feet wide, and practically inaccessible to municipal fire department equipment. A spill fire, which might occur in the cars or tanks, would be a major threat to the entire plant.

Help from the Navy

Factory Insurance Association engineers, working with company representatives, considered all standard methods of protection and discarded them as unworkable. Relocation of the storage and loading area would, of course, be prohibitively expensive. Their solution: A readily adaptable extinguishing agent used extensively by the Navy, known popularly as "bean soup." Consisting of a mass of mechanically formed air bubbles, the soyabean base material has the advantage of being easily handled in simplified systems. When mixed six percent with water and aerated, it forms a heavy foam mass that moves around obstacles, quickly smothers gasoline, benzol, naphtha and other Class B fires.

To handle the foam material, an automatic system was required. Should fires start in the company's naphtha or varnish tanks, they would soon cause leaks in pipes and fittings, adding fuel to the fire. Employees on duty at night were not located near the problem area, so that a manually actuated extinguishing system would be of no help. Other requirements: The foam blanket should prevent flash-back fires for at least several hours; it should be available in sufficient quantity to put out one fire, keep an equal quantity in reserve; provisions should be made to include portable mop-up equipment.

Mechanics of the System

The area to be protected was divided into three sections and separate units were designed and installed for them. All of the sprinkler systems are fed by a foam storage and injection unit consisting of a double-compartmented 800 gallon foam liquid storage tank and an injection pump. One compartment of the tank is always open for suction to the pump, keeping the other half in reserve so that the system can go into action again immediately following a fire. 58,000 gallons of foam are produced by each compartment, a total of 116,000 gallons from utilization of entire supply.

Triggers of the system are six inch valves in each section. They are actuated by pressure impulses from pneumatic heat detectors which are located strategically throughout the protected area. Piping of the sprinkler systems is galvanized and hydraulically designed to get the most efficient use of water. Each is equipped with 16 overhead foam discharge devices which spit the aerated foam out at 75 pounds per square inch pressure.

Sprinklers differ from the ordinary, working on the rate-of-rise principle. Instead of starting when high

18 SECONDS later the system is operating at nearly full force, while alarm gongs alert plant protection men. Nine portable stations inside the plant are ready to go at the same time.

2 MINUTES are enough for complete area to be covered with foam. Total 3½ minute test used less than one-fourth of total foam liquid: system is ready to return to work immediately.

ean soup" extinguishing

th foam in only three and a half minutes

Photos, "Automatic" Sprinkler Corp. of America

temperature fuses the head, they go to work when the temperature rises at any predetermined rate. This makes the system adaptable to foundries or refrigeration plants, where normal temperatures vary greatly. Minor heat rises, within the limits of the setting, will not actuate the sprinklers; as, for instance, that developed when a switch engine enters the company's siding.

Blanket Six Inches Thick

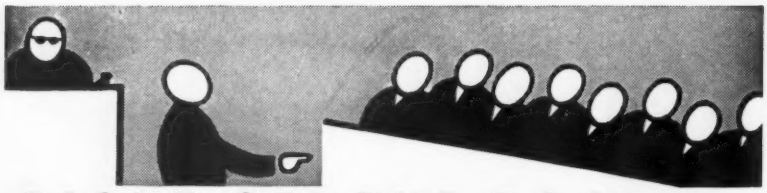
More than seven and a half minutes' supply of foam is available from each compartment of the storage tank. Covering protected areas at a rate of about two inches per minute of operation, the system will put out fires in less than three minutes from the time of origin. The entire Schenectady Varnish Company loading tank storage area could be covered with two blankets of foam, each six inches deep.

Nine portable hose stations located within the plant are served by the same tank and pump as the three outside systems. These are for mop-up operation in conjunction with the main sprinklers. A 50 gallon cushion tank will supply several minutes of foam operation to the portable units before the main pump cuts in.

At a recent test run of the installation (see cuts) the three systems checked out perfectly. Within 18 seconds after a heat testing pan was applied to one of the pneumatic heat-actuated devices, the six inch main valves had opened, starting the injection of foam liquid into the sprinkler system. Two seconds later, the units were operating at full force. After three minutes and twenty seconds' operation, about 190 gallons of foam liquid—less than half of the supply of one storage tank compartment—had been exhausted. The foam liquid had been injected six to six and a half percent with water, giving a 30 percent safety margin above the five percent minimum injection rate. Fast starting of the installation would catch flammable liquid fires before they could ruin pipe lines, run through them and ignite the entire storage tank group. Alarm gongs, actuated by the main valves, would alert plant protection men when the sprinklers start.

At the completion of the test, approximately seven inches of foam blanketed the railroad siding. When water was discharged on the foam no serious dissipation of the blanket was apparent. The tests also showed that water, properly applied, may be useful in reducing the volume of foam liquid needed to control fires: Optimum rate of injection is between five and six percent. The cleaning up problem proved to be non-existant: After several hours — enough time to prevent

(Continued on page 48)



RIGHT OFF THE DOCKET

Claimant's Validity Questioned

THE claimant seeks recovery under the Compensation Act on the ground that she was the widow and dependent of the decedent, Bernard Abbott, who was an employee of an employer amendable to the provisions of the Workmen's Compensation Act, and was killed in the usual course of his employment. The Commission defended upon the ground that the claimant was not the widow or lawful dependent of the decedent.

Some fifty years ago, when the claimant was 15 years of age, she contracted a marriage with a man named Samuel Renker in the state of Pennsylvania. She lived with him a few weeks in Pennsylvania, and in the city of Cleveland, when they were separated; and she has had no contact with him since. In 1902, she began to co-habit with a man in the state of Ohio named William Medley, and this continued for 27 years, at the end of which time they were separated. The question is whether this was a common-law marriage, or simply an illegal cohabitation. It is conceded that there was no divorce between these parties.

On July 29th, 1939, the claimant married the decedent, Bernard Abbott, and lived with him until September 17, 1940, the date of his death. During the pendency of the application before the Industrial Commission, the claimant brought an action in the Common Pleas Court of Muskingum County to annul the ancient marriage with Samuel Renker, and he consenting, the court entered a decree of annulment.

The right to participate in benefits due to the death of Bernard Abbott had to be determined as of the date of his death. If claimant's marriage with Renker was valid and subsisting, then her two subsequent performances were illegal and invalid. If the Renker marriage was not subsisting, and she later contracted a common-law marriage with Medley, then she could not claim as a dependent of Abbott. If either of those former marriages was valid and in full force at the time of her marriage to Abbott, she was simply guilty of bigamy at that time.

As to the Renker marriage, the Pennsylvania laws provided that no person under the age of 21 years was able to obtain a license without the consent of parents or guardian. However, the validity of the marriage itself is not affected. In other words, the mere fact that a license was obtained by a young lady of 15 years of age without the consent of the parent does not affect the validity of the marriage itself.

This marriage was, therefore, concluded to be valid at least until the time of its annulment by the Common Pleas Court. However, the annulment was belated and could not affect the rights of the parties in the instant case.

The court held up in its conclusion to say that even if there were any questions as to the validity of the Renker marriage, it would hold that the relationship between claimant and Medley was such to constitute a common law marriage in Ohio, and since there was no divorce from that marriage, the marriage between the claimant and the decedent was bigamous.

Under the Compensation Act, Section 1465-82 of the General Code of the State of Ohio, claimant was not recognized as widow and dependent of the decedent. Claim was disallowed.

Abbott vs. Industrial Commission of Ohio, Court of Appeals, Muskingum County. (80 Ohio App. 7)

Burned While Washing Personal Car

CLAIMANT was an oil field worker by trade. For five days prior to the time of the accident, he was employed by the drilling company as a roughneck in the drilling of an oil test well. His duties were that of a driller's helper.

On September 12th, 1948, he drove to work in his own car, accompanied by his driller, Adams. Upon arrival at the well, claimant changed clothes, assisted in oiling and greasing the equipment and then started to wash the tool houses with rags and kerosene. In doing so, his clothing became partially saturated. Before he finished washing the outside of the second tool house, the kerosene became dirty and he got a bucket of liquid, which he thought was kerosene, from a barrel which was not marked to indicate that it contained gasoline.

After cleaning the tool house, he and another fellow roughneck, decided that inasmuch as there was nothing else to do right at that particular time, they would work on their cars. Both drove their cars up to the drilling rig so as to be available in the event their services were needed on the job. Claimant raised the hood on his car and started to wash the engine with a paint brush and the fluid, which was probably gasoline. In doing so, he touched the starter switch or something with the brush, causing a spark which in turn ignited the fluid and set fire to his clothing. As a result he received severe burns, for which he has since been treated.

Claim is resisted on the theory that the injury sustained by claimant did not arise out of and in the course of his employment. The claimant contended that he had for several years worked in oil fields; that none of the companys provided transportation to and from work nor paid driving expenses.

He was corroborated in his statement that other employees wherever he worked were permitted to work on their cars when there was nothing else to do and that on the particular job in question, where he had been employed five days, he was never told not to work on his car in his spare time. He indicated that Adams, the driller and boss, saw him pull the car up to the rig and start to work and that he made no objection.

There was further proof offered to indicate custom as to the matter of employees being permitted to work on their cars during slack time. One of the employees who had worked on the oil field for the past 15 years indicated that he had

never refused his men the privilege of working on their cars when there was nothing else to be done. Adams, the driller in charge of the operation of the company contended that he didn't believe he saw the claimant do any work on his car at the time in question, although he had seen him in it.

At the time of the accident, the claimant was in his employer's service. He was on the job and there was no question that the accident occurred in the course of employment. The only question remaining was did the accident arise out of the employment?

General custom in the oil field as testified to provided that the men take care of their own transportation problem to and from work. It was customary for them to work on their own cars when not otherwise occupied, and it was customary for them to use their cars in running errands for materials and repairs whenever necessary.

The words "casual connection" certainly do not mean that the accident must have resulted directly and immediately from performance of the work for which the workman was employed. Such a narrowed interpretation would mean that whenever a workman was not directly engaged in the actual work to be done, he would be without protection under the law.

Claimant was never told not to work on his car on this or any other oil field job. Adams, the driller, admitted that the rule of the company was not in writing and had never been posted on the premises or otherwise communicated to claimant.

The accident, therefore, arose out of the employment as well as in the course of the employment and an award was granted.

Hilyard vs. Lohman Johnson Drilling Company, Supreme Ct. of Kansas. (211 P2 89)

Cause Of Death Indefinite

ROY FRANKS was a healthy able bodied man of 40 years at the time of his death. He was doing repair work on an electric trolley line just prior to his death. He had been dragging an old piece of trolley line some fifty feet in length.

The mine entrance at the point where the body was found was 34 inches in height and had a trolley line giving off some 250 to 275 volts of electricity also attached to the ceiling of the mine. The body was found face up with the head across one steel rail and the legs across the piece of trolley wire. There was a small abrasion over the left eye from which a small amount of blood was oozing. There was also a slight bruise or scratch on the neck and a small place to the left of the breast bone. There was no indication of a bonding or burning on the piece of trolley wire which Franks had been dragging, nor were there any burns found on the body.

Aside from these two significant points, the circumstances and physical facts pertaining to the place where Franks' body was found would raise an inference of his having been electrocuted. However, they did warrant an absolute conclusion to this effect.

Three doctors participated in performing an autopsy. All three doctors said there was no discoloration of the blood as was to be expected in cases of electrocution, that no bubbles were found about the brain

DOCKSON PROTECTION

IS... Built for Better Service

GOGGLES

A complete line of scientifically designed eye protection that offers easy to wear, long-lasting safeguards against particles, fumes, injurious rays or chemicals. Dockson Series 40 and 76 Goggles shown here.

FACE SHIELDS

Tough, featherweight face protection for all types of hazards. Our complete line of shields is carefully engineered to provide the utmost in comfort and safety. Dockson Series 1120 and 1180 Face Shields shown here.

HELMETS

Each Dockson Helmet is built for severe service and greatest protection. Easy to raise or lower, stays put at any level, cushioned headgear for comfort. Dockson No. 1475 and No. 1250 Helmets shown here.

THERE IS A DOCKSON DISTRIBUTOR NEAR YOU — NAME ON REQUEST. Send for our complete catalog of head and eye protection.

Dockson CORPORATION
3839 WABASH STREET • DETROIT 8, MICHIGAN

as is usually the case; and that the heart muscles did not show a condition which is usually found in cases of electrocution. Likewise, there were no burns found on the body. All of the doctors concluded that Franks did not meet his death as a result of electrocution.

The claimant, however, presented the testimony of two doctors, one of whom said death could have resulted from heart failure or shock. This particular doctor was not present at the time of the autopsy. It was his opinion that the blood would be dark in the case of electrocution, but he did not think that burn marks would be left upon the body. In his opinion, however, death resulted from electrical shock.

One of the doctors testified for the commission in response to a hypothetical question and indicated that he had read the report made by the doctors who performed the autopsy; that in his opinion, since there were no signs of disease in the autopsy report, death must have been caused by electrocution.

It was his opinion that death could have been caused as the result of a cerebral hemorrhage, electrocution or various causes; and, that from his experience, it would not be necessary that there be any burns on the body from high voltage, when instant death occurs.

The Court concluded that the testimony of the two physicians that death could have been caused by electrocution was sufficient to warrant a recovery in the instant matter.

Dixie Darby Fuel Company vs. Franks, et al., Court of Appeals of Kentucky. (224 SW2 147)

TYPE J-1 EYESHIELD, shown with 6-inch clear visor.

"They're Not Kidding"

3 VISOR DEPTHS:

No, safety experts are not kidding when they say that eye injuries cost far more than the cost of adequate protection.

The Featherlight Type J-1 Eyeshield is used for metal pouring and finishing, spot, gun, and flash welding, wood working, etc.

The extruded plastic headgear, moisture proof and easily sterilized, has sweat band for greater comfort. A pivoted spark deflector which protects the forehead carries the replaceable visor, snapped to the outside. This visor is made of fire repellent clear plastic, made in three thicknesses; also in light, medium, and dark green .020" thick only. All are available in three depths, are 11 inches wide for full face protection, and have wire-reinforced binding.

Jackson Eyeshields are sold through distributors in principal cities of the U.S. and Canada.

3 VISOR THICKNESSES:
.020"
.030"
.040"

JACKSON
PRODUCTS
WARREN · MICHIGAN

SAFETY GOGGLES · SPECTACLES · EYESHIELDS

Mistook Carbon Tet For Whiskey

ALEX LANCASTER was employed as a spotter for the Washington Cleaners & Dyers, a partnership composed of Edward, James and Edward Satchell, Jr.

On the afternoon of December 24th, while at his place of employment, Lancaster drank carbon tetrachloride from a bottle which he evidently thought was whiskey. Five days later, he died from the effects of the poison. The employers had approximately 45 employees. Lancaster had been in their employ for six years. Employers gave a Christmas party at the plant for which they provided food and drink, which included a case of whiskey, which was entirely consumed during the course of the party.

On the date of the party, when Lancaster came home, he told his daughter that he was suffering great distress; told her further that there had been a party at the plant and that he had drank carbon tetrachloride. There was considerable testimony to indicate that although Edward Satchell, one of the employers, was opposed to drinking by the employees, nevertheless it appears as if considerable drinking took place during the course of employment. The record revealed that whiskey bottles were used to pour in cleaning fluids. Friday afternoon card games and drinking, indulged in during a recess in the work of the spotters, was a recognized and customary practice.

The question to be determined was whether whiskey drinking on the day before Christmas was reasonably contemplated by the terms and conditions of Lancaster's employment. From the record, it appears that two employees were

discharged from time to time previously for drinking; nevertheless, moderate drinking went on without steps being taken to prevent it. Had drinking taken place with the express consent of the employers solely at the Christmas party, the result would have been different.

However, circumstances surrounding the employment indicate definitely that whatever drinking took place on the 24th day of December, was in the course of practices which were customary with the particular class of employees to which Lancaster belonged. The drinking of whiskey under the circumstances related was to be anticipated under the conditions of Lancaster's employment. Edward Satchell, one of the employers, had reminded Lancaster of the rule against drinking "maybe three times a week".

This was convincing evidence that the employers knew of the employee's drinking and warned him against it and also knew that the warnings weren't effectual, and kept him in spite of his drinking. The drinking of whiskey by Lancaster and other employees was well known by the employers and tolerated by them. It is their knowledge of the conditions existing that persuaded the Court to arrive at the conclusion that the injury could reasonably be held to have arisen out of and in the course of employment.

There was also proximate relation between Lancaster's drinking the fatal poison and the poisonous fluids stored in whiskey bottles for the use of the spotters in the use of their work. The accident, having arisen out of his employment and in the course of the employment, was deemed to be compensable.

Satchell, et al., vs. Industrial Accident Commission of the State of California, et al (210 P2 867)

Injured While Enrolling For Vocational Educational Course

LEO ZUPIN was employed as a sheet metal worker by the Hamilton Heating Company at the time of his death. On the morning of the day of this death, he reported to work at the offices of the company at South Bend, Indiana. He and one Emery Borders, to whom he was apprenticed, were assigned to a job in the northeast part of South Bend, Indiana.

He and Borders left the plant in Borders' car, for which Borders was paid mileage for its use by the company, taking with them certain metals and tools for their work. Zupin asked Borders if they could go past the South Bend High School so that he could sign up for the sheet metal course they had there for veterans, since they were closed after working hours.

To do this, it was necessary for them to drive south from the line of travel to the job site. Borders double parked his car on the west side of Williams Street, directly across the street and in front of the Central High School Vocational shop. There was a truck back of Borders' car. Zupin got out of the right hand door of the car and started to cross the street. He was struck by a Dodge car being driven south on Williams Street, and then was taken to the hospital where he later died of the injuries received.

It was clear from the facts that Zupin had gone several blocks out of his direct route to the job to which he had been assigned by his employer, and had gotten out of the conveyance furnished by his employer to take him to his place of work, to cross the street for the pur-

How CLEANLINESS is AUTOMATIC with WASTE RECEPTACLES

● Everybody is automatically a member of your cleaning department by conveniently placing Bennett Bilt Waste Receptacles to invite their use. These waste receptacles are sanitary, economical and a major help to cleanliness and neatness. *Put them to work for you today.*

ONLY WASTE RECEPTACLES HAVE ALL THESE FEATURES

- Non-rusting stainless steel feet eliminate rusting and rust marks
- Made of extra heavy-gauge Mayari R, Bethlehem's corrosion resistant steel
- All-welded construction
- Smooth exterior surface . . . nothing to catch and tear clothes
- Reinforced corners
- Strong springs keep doors closed providing greater sanitation and eliminating fire hazards
- Rounded corners for structural strength and pleasing appearance
- Baked enamel finish . . . white or green

These are a few of the many features that make Bennett Bilt Waste Receptacles a natural "buy." Quality and every consideration for hard usage are self-evident both inside and outside of these receptacles.

Write for fully-illustrated catalog TODAY.

Independently hinged doors
High tension springs keep doors closed
Burlap bags or galvanized liners are quickly removed

THE BENNETT MANUFACTURING CO., ALDEN, N. Y.
CUSTOM METAL CRAFTSMEN SINCE 1906

pose of enrolling in a vocational education course under the G. I. Bill of Rights. As the result of such enrollment, he would have been able to collect a wage differential up to a guaranteed minimum of $50.00 per week.

It appears that his death occurred within the time of his employment and while he was performing the duty of enrolling in the apprentice training school, which training the Court found was a part of his employment contract. Fact is recognized that it is not unusual for an industry to encourage an employee to enroll in educational courses of various types of training courses on their own and completely outside of working hours and the employment relationship.

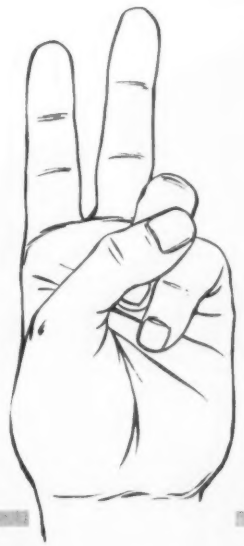
In the instant case, the decedent was pursuing apprentice training for the particular work which he performed for the employer and he was engaged in such pursuit on the company's time with the company's permission. Under such circumstances, it appears clear that the accident suffered by him arose out of and in the course of employment under the correct interpretation of the statute.

There is a casual relationship between the accident and performance of some services for his employment, and the accident arose out of a risk which a reasonably prudent person may comprehend at the time of entering into employment.

Since his enrollment in the course of technical training under the Servicemen's Readjustment Act, sometimes called the G. I. Bill of Rights, was recognized under his employment relationship, and since the employer permitted him to take such training, if necessary even on company time, that the injury suffered ultimately causing his death while crossing the street to enroll in such training, is deemed to have arisen out of and in the course of employment.

E. R. Burget Co., Inc., et al, vs. Zupin, Appellate Court of Indiana, Dec. 22, 1948

32 Northeastern Reporter, Second Series, Page 897



FOR THE DAVIS D-CARTON

2 new

FIRST AID "MUSTS"

FIRST AID FOR BURNS

★ KILLS PAIN ALMOST INSTANTLY
★ ANTISEPTIC ★ GREASELESS
★ EXCLUDES AIR

Combines air exclusion, antisepsis, local anesthesia. Non-greasy, water soluble base is the perfect answer to a painlessly removable first aid for burns.

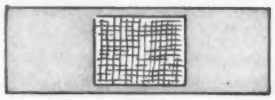
*Americaine Reg. U. S. Pat. Off.

SEND FOR BULLETIN NO. 318

*Americaine furnished in package to fit First Aid D-Carton System.

THE RIGHT DRESSING FOR EVERY FIRST AID NEED

*Band-Aid Patch Dressings 1½" square



*Band-Aid Elastic Adhesive Bandage 1"x3"

*Band-Aid Spot Dressings ¾" Diameter

*The Trade Mark of Johnson & Johnson

● Elastic ● Waterproof ● Flesh color
● Vent hole for aeration ● Sterile

SAFETY DAVIS DIVISION

DAVIS EMERGENCY EQUIPMENT CO., INC.
45 Halleck Street, Newark 4, N. J.

SEND FOR BULLETIN NO. 319

HOME-MADE FIRE WAGON

From Page 14

reeled.

In addition to the hose and fittings carried on the fire wagon, we equip it with the following items, so as to be ready for nearly any emergency:

2½" fire hose: (50 feet)
1½" fire hose: (50 feet)
⅝" manila rope: (100 feet)
2½" female to 1½" male adapter (1)
1½" straight nozzle: (1)
Salvage cover, fireproof tarpaulin (1)
Rubber boots: (2 pairs)
Fire coats: (2)
Fire hats: (2)
Electric fire lamps (2)
All-purpose gas masks (2)
Fire axe (1)
Wrecking bar (1)
Hand Saw (1)
Carbon tetrachloride fire extinguisher, one quart capacity (1)
Sprinkler head cabinet with 12 assorted heads (1)
Sprinkler head wrench (1)

A shelf at the end of the wagon carries a tool box which contains the following hand tools:

Rubber safety gloves with goatskin cover (1 pair)
Bolt cutter, insulated (1)
Ball peen hammer (1)
Pliers (1)
12" crescent wrench (1)
12" pipe wrench (1)
Screw driver, insulated (1)
Hydrant wrench (1)
Spanners (4)

ABSENTEEISM due to COMMON COLD

Use MELCO, the new Anti-Histomine Tablet that has already proven itself!

The very same formula used successfully in U.S. Navy and clinical tests.

Prevents — controls the common cold with 70-90% effectiveness when used within first 48 hours . . . the earlier the better!

The first important aid in cutting down loss of working hours resulting from the common cold.

Manufactured under rigid analytical control.

1000 TABLETS $8.50

In lots of 5000 tablets or more, $8.00 per 1000.

Note: Glassine envelopes supplied for individual use.

Keep them on the job . . . Order At Once!

Instructive Posters Supplied Free

SILVER ROD PHARMACAL CO., INC.

Established 1919

660 Newark Ave. Jersey City 6, N. J.

Companions . . . FOR COMPLETE EYE PROTECTION

SAF-I-SHIELD

All Purpose Safety Goggle

Made of "Optilite"—lightweight, optically correct, strong, comfortable. Can be worn over prescription glasses — one size fits everyone. A goggle everyone will wear with pride.

SAF-I-SPEC

Smart Appearance — Instant Snap-On Temples

Made of "Optilite"—weigh less than one ounce. Temples clip on or off instantly—easily adjusted to fit any wearer's face. Tough—rugged—this is the spectacle safety men have been waiting for. LOW COST.

UNITED STATES SAFETY SERVICE CO.

KANSAS CITY 6, MO. • BRANCHES IN PRINCIPAL INDUSTRIAL CITIES

Safety Shoe Service at YOUR Door

Here is the service you have been waiting for. Let our "Store on Wheels" supply the safety shoe needs of your employees from our complete stock of Hy-Tests . . . the world's largest selling safety shoes. Over 20 types and styles in a complete range of sizes and widths.

Write or Call

FREEMAN'S

INDUSTRIAL SHOE SERVICE

1316 E. 63rd ST. • CHICAGO, ILLINOIS • PHONE DORCHESTER 3-8219

are your glove costs **too high?**

YOUR COST DEPENDS ON THREE FACTORS

1. *Using the correct glove for the job.*
2. *Proper stock control. A clean pair for a dirty pair.*
3. *Salvaging by proper cleaning, repair.*

Wash-Rite specializes in "Rite-to-Wear" gloves for every job. Complete stocks. Immediate shipment. We have assisted many of the country's largest industries in setting up a money saving glove control system.

"Wash-Rite" is exclusively engaged in the correct and scientific cleaning, sterilizing, repairing, reshaping and processing of industrial work gloves, aprons and other protective clothing.

CLEANERS AND PROCESSORS OF LEATHER COTTON AND RUBBER GOODS

REDUCE YOUR COSTS WITH "WASH-RITE'S" PROVEN SERVICE. SEND US A FREE TRIAL ORDER TODAY!

Wash-Rite Company, Inc.

1412-26 CORNELL AVENUE · INDIANAPOLIS 2, INDIANA

COMING EVENTS

Mar. 5-7, Memphis, Tenn.
Southern Safety Conference, Braxton B. Carr, secretary-treasurer, 2120 First Ave., North Birmingham 3, Ala.

Mar. 7-8, Philadelphia
Sixteenth Annual Regional Safety Conference and Exhibit. (Bellevue Stratford Hotel.) Walter W. Matthews, managing director, Philadelphia Safety Council, Chamber of Commerce, 17th & Sansom St.

Mar. 20-21, Boston
Twenty-ninth Annual Safety Conference and Exposition. Edgar F. Copell, president, Mass. Safety Council, 31 State St., Boston 9.

Mar. 28-31, New York
Twentieth Annual Safety Convention and Exposition, Greater New York Safety Council. (Hotel Statler). Paul F. Stricker, executive vice-president, Greater New York Safety Council, 60 East 42nd Street, New York 17.

Apr. 5-8, Charleston, W. Va.
West Virginia Annual State-wide Safety Conference. W. C. Easley, managing director, West Virginia Safety and Health Council, 316-17 Masonic Bldg., Charleston, W. Va.

Apr. 11-13, Columbus, Ohio
Twentieth All Ohio Safety Congress and Exhibit. (Neil House.) James H. Fluker, chairman; G. S. Kallenbaugh, congress manager, 65 S. Front St., Columbus 15.

Apr. 12-13, Buffalo, N.Y.
Tenth Annual Western New York Safety Conference. (Hotel Statler.) Eugene C. Hohlstein, c/o Buflovak Div., Blaw-Knox Co., 1543 Fillmore Ave., Buffalo.

April 18-20, St. Louis, Mo.
Central States Safety Conference. (Hotel Jefferson). Reyburn Hoffman, secretary-manager, The Safety Council of Greater St. Louis, 511 Locust Street, St. Louis, Mo.

Apr. 23-29, Chicago
American Association of Industrial Physicians and Surgeons. 35th Annual Convention. (Hotel Sherman). Dr. Edward C. Holmblad, 28 East Jackson Blvd., Chicago 4.

Apr. 24-25, Toronto, Ont.
Annual Convention, International Accident Prevention Associations. (Royal York Hotel). R. B. Morley, general manager, International Accident Prevention Associations, Toronto 2, Canada.

May 2-4, Chicago
Twenty-seventh Annual Midwest

Safety Show. (Hotel Sherman.) Joseph F. Stech, manager, Greater Chicago Safety Council, 10 N. Clark St., Chicago 2.

May 2-4, Pittsburgh

Twenty-fifth Annual Western Pennsylvania Safety Engineering Conference. (Wm. Pitt Hotel.) Harry H. Brainnerd, exec. manager, Western Pa. Safety Council, Chamber of Commerce Bldg., Pittsburgh 19

May 3-5, Charlotte, N. C.

Twentieth Annual North Carolina Statewide Industrial Safety Conference (Hotel Charlotte). H. S. Baucom, safety director, North Carolina Industrial Commission, Raleigh.

May 18-19, Duluth, Minn.

Lake Superior Mines Safety Council, 26th Annual Conference. (Hotel Duluth). John A. Johnson, supervising engineer, U. S. Bureau of Mines, 18 Federal Bldg., Duluth 2, Minn.

June 1-3, Roanoke, Va.

Sixteenth Annual Virginia Statewide Safety Conference. (Hotel Roanoke.) Wm. M. Myers, managing director, Richmond Safety Council, Allison Bldg., Richmond 19, Va.

June 18-21, Boise, Idaho

Western Safety Conference. Paul V. Black, president, c/o Idaho Compensation Co., Boise, Idaho.

June 30-July 2, Chicago

American Association of Railway Surgeons. (Drake Hotel). Chester C. Guy, M.D., secretary, 547 West Jackson Blvd., Chicago 6.

CONTROL FOR CHEMICALS

From Page 13

ing department fill requisitions for the material in question. Other copies of the Chemical Use Authority go to the department making the request for use, the medical department, the safety department and the general storeroom. This latter copy is important to assure correct storage of all chemicals: sometimes special storage facilities are arranged to conform to the authority.

By examining the potential trouble-maker before it is admitted to the plant, the chemical safety committee can equip workers to understand and cope with its peculiarities. Departmental supervisors are then able to carry on standardized use methods. Harrison officials are confident that this procedure has reduced substantially accident and fire hazards and toxic exposures, as well as having controlled dermatitis and other potential occupational diseases.

Your Best Protection
FOR FLAMMABLE LIQUID, GAS AND ELECTRICAL FIRES
GASOLINE
OIL
LP-GAS
NAPTHA
BENZENE
ALCOHOL
LACQUER
VARNISH
SOLVENTS
PAINTS, ETC.
ANSUL
DRY CHEMICAL
FIRE EXTINGUISHERS
They're most dependable too! Years of field service on all kinds of industrial applications has resulted in outstanding design features available ONLY in Ansul Dry Chemical Extinguishers.
FIRE PROTECTION by the dry chemical method has proved Most Effective as well as Most Economical. And only Ansul offers a complete line of hand, wheeled and stationary dry chemical fire extinguishers. Investigate Ansul Piped Systems for protection of special hazards.
Send for File No. 506. You will receive a variety of helpful printed matter. Included is our latest catalog which describes Ansul Extinguishers of all sizes — from the small Ansul Model 4 to Ansul Piped Systems and Ansul 2000 lb. Stationary Units.
ADVANTAGES
1. Quick, Positive Extinguishing Action.
2. Easier on the Spot Recharge (No special tools needed).
3. No Annual Recharge Necessary.
4. Low Maintenance Costs.
5. ANSUL PLUS-FIFTY Dry Chemical used Exclusively.
6. Long Range Stream.
7. Effective in Winds and Drafts.
8. Stream pattern forms heat shielding screen to protect operator.
9. Listed and Approved by Underwriters' Laboratories, Inc., and Factory Mutual Laboratories.
PIONEERS OF DRY CHEMICAL
ANSUL
ANSUL CHEMICAL COMPANY
FIRE EXTINGUISHER DIVISION, MARINETTE, WISCONSIN
DISTRIBUTORS IN PRINCIPAL CITIES IN THE UNITED STATES, CANADA, AND OTHER COUNTRIES

NOW! AN IMPORTANT and EXCLUSIVE NEW IMPROVEMENT IN FIRE EXTINGUISHERS

BUFFALO better-built

VL FIRE EXTINGUISHERS with-

DRYEX THE AMAZING NEW DRYING AGENT!

Long proved for its speed and effectiveness in fighting fires of electric origin, also against fires in oils, gasoline, paint, greases and other flammable liquids, the Buffalo *better-built* VL Fire Extinguisher is now more dependable than ever! Each VL Extinguisher now contains DRYEX, the exclusive new drying agent that removes all traces of moisture, prevents corrosion and rust, insures continuous accuracy of performance and adds many years to the dependable life of the extinguisher.

1-qt. VL Fire Extinguisher containing DRYEX

Also available in 1½-qt., 1-gal. and 2-gal. sizes

WRITE US for full information on **DRYEX** and name of your nearest Buffalo distributor.

BUFFALO FIRE APPLIANCE CORPORATION
DAYTON 1, OHIO

Established 1895

LETTERS

Continued from page 6

Permission To Reprint

Editor:

We would like to have permission to make photostatic copies of your August article on respiratory protective devices (page 29) for use on our bulletin boards throughout all operating areas.

J. H. McKenzie
Manager, Safety Dept.
General Petroleum Corp.
Los Angeles

Editor:

We are contemplating publishing a monthly bulletin for our foremen. We find many interesting and educational items in O.H. and would like your permission to reprint them for this purpose, using a credit line.

W. B. Taylor
Safety Director
Continental Steel Corp.
Kokomo, Indiana

● *Certainly.*

Technical File

Editor:

We have a policy holder who has need for reference to your technical file on metal poisoning, particularly on the physical properties and effects of lead, as contained in your file number C-109, File C-117. As the page on which this reference material is inserted does not show the date of this issue, I will appreciate your advice so that we can inform our policy holder as to just which magazine to check for this information.

In Texas, we have been particularly interested in occupational diseases since September, 1947, when the Occupational Disease Law went into effect, and the reference material contained in your magazine has been very helpful to us.

F. E. Wettstein
Texas Employers' Insurance Association, Houston

● *We are pleased to send tear sheets of the files requested, from the August and September, 1947, issues of Occupational Hazards. Whenever we can be of assistance, just say the word.*

Interesting Presentation

Editor:

We wish to take this opportunity

Place of Honor

TARA BROOCH
7th-8th Century A.D.
National Museum of Dublin

THIS magnificent brooch, "most famous of all Gaelic antiquities, is unanimously pronounced by goldsmiths and connoisseurs as . . . the finest piece of jewelry ever produced in any country."[1] Exquisitely fashioned of white bronze, its execution represents almost every process known to ancient goldsmiths . . . "and reflects that spirit which has created every masterpiece of art the world over."[1]

To strive for perfection in every detail, whether the result shall be visible or not, is the ideal of the true craftsman. To attain the highest skill, whether in the arts, science or industry, is the essence of indisputable leadership.

Such is the principle behind the constant effort of Pax for a full quarter century to make Pax Heavy Duty the finest of all industrial skin cleansers. Today, its preference among industry and workers is a testament to faultless quality, matchless cleansing efficiency, unsurpassed safety and notable economy.

[1]Ring Brooches of Medieval Ireland, by Eileen Buckley

PAX-LANO-SAV HEAVY DUTY
GRANULATED SKIN CLEANSER

PAX

PAX-LANO-SAV*—a superior skin emollient combining lanolin and other special skin normalizers.

The Pax trademark symbolizes a deep-rooted tradition of superlative quality maintained through a quarter century of continuous research and development.

ADVERTISED IN AMERICAN MEDICAL ASSOCIATION PUBLICATIONS

G. H. PACKWOOD MANUFACTURING CO. • 1545-55 TOWER GROVE AVE. • ST. LOUIS 10, MO.

50-B

Manufacturers of Fine Industrial Skin Cleansers

*Tradename of G. H. Packwood Mfg. Co.

In addition to PAX-LANO-SAV HEAVY DUTY, PAX also offers the following powdered or granulated quality skin cleansers: PAX CORN-TEX • PAX HYSPEED • DICTATOR SPECIAL PURPOSE • BORAPAX • SUPER-X • VELVAPAX LIGHT DUTY • OFFICE-PAX • PAX MECHANICS. Also available are PAX WATERLESS and PAX HECTO INK CLEANSING CREAM • PAX SKIN CLEANSER ECONOMIZER DISPENSERS • and many other fine PAX Products.

Willie's about to BREAK A RECORD

Unfortunately, it's the plant's *safety record*. And Willie will be mighty lucky if that's *all* he breaks.

Slipping accidents *can* be prevented — simply and economically — with ***Wyandotte Zorball****. This all-purpose floor absorbent absorbs oil, grease, water, paint and other liquids — provides soiled floors with an immediate anti-skid surface.

Zorball is nonflammable and, even when saturated with oil, it resists burning. It's harmless to fabrics, wood, metals and rubber and will not irritate the skin of those who handle it. Because Zorball won't cake, pack or form "mud," it will not readily cling to workers' shoes. This helps assure a cleaner, safer plant or shop.

For safety's sake, get acquainted with Wyandotte Zorball today. For information, just call your nearest Wyandotte Representative.

**Wyandotte Zorball is listed by Underwriters' Laboratories, Inc.*

WYANDOTTE CHEMICALS CORPORATION
Wyandotte, Michigan • Service Representatives in 88 Cities

Wyandotte
REG. U. S. PAT. OFF.

LETTERS

Continued

to express our appreciation of the very fine work and interesting manner of presentation which has been shown in the issues of O.H. which we have received.

It seems to be the only publication which is on the level of the average safety committee-man, and in which they take an interest in following to the end the articles presented. Assuring you that each copy is routed to all of our safety group and to our nurse, we are,

H. S. Foust
American-Marsh Pumps, Inc.
Battle Creek, Mich.

● *Many thanks to reader Foust and others who have sent such kind words.*

Resuscitation Equipment

Have you any material on emergency resuscitation? I am working on a manual for Fire Department Rescue Squads . . . especially interested in obtaining any available material on those noxious gases frequently encountered in Fire Fighting.

Carl B. Young
University of Texas

● *Please refer to page 29 of our August issue, "Respiratory Protective Devices and Emergency Breathing Devices." Material there may be of help. Also watch advertisements of this type of equipment as they appear in OH.*

Woodworking Safety

Editor:

This is to let you know that we appreciate the many fine articles which you print in O.H. They do a lot of good.

We would like to make a request. If you have separate reprints of articles, we would like to have three copies of the article, Your Guide to Safety in Woodworking Shops, which appeared in the September, 1949 issue.

C. M. Alspaugh
Monsanto Chemical Co.
Miamisburg, Ohio

● *Sorry, no reprints. Three additional copies of O.H. carrying the article are on the way to you.*

NOW for a better fit, more comfort, longer wear

NEW, IMPROVED NEOPRENE HOOD INDUSTRIAL CURVED-FINGER GLOVES!

HOOD has done it again! For years, HOOD gauntlets and knit wrist gloves have been the choice of industry. Today, the new, improved models are ready to provide new comfort and safety for *vital* hands. Exhaustive tests *prove* their superior wear! There's ample knuckle allowance! Fingers and thumbs are curved for more efficiency! Gauntlet shown has thumb crotch reinforcement! There are no seams on the working surface! Knit wrists are *color fast!* Both models are bigger, more flexible! Yes, be sure of new protection, new efficiency with the new, improved HOOD Industrial Gloves. Order from your jobber today!

HOOD for Safety plus

HOOD RUBBER CO.
Watertown, Mass.
DIVISION OF THE B. F. GOODRICH COMPANY

MARK FACTORY AISLES
for Plant SAFETY and EFFICIENCY

A well-planned orderly factory is a distinct asset to any firm. Start by striping all factory aisles, storage areas, safety zones, etc. An M-B Marker simplifies the job. It lays down clean-cut lines, quickly and easily. Paves the way for safe traffic through plant . . . reduces accident hazards . . . adds to plant efficiency. Convertible to all purpose paint sprayer. Write for literature.

SINGLE LINE MARKER
Hand-propelled model. Easily operated by any shop maintenance man.

MEILI-BLUMBERG CORP.
BOX 210
NEW HOLSTEIN, WISCONSIN, U. S. A.

MB

INDUSTRIAL MARKERS

A 5395-½-A

There's No "CURE-ALL" IN CUTTING OIL SANITATION

Shop conditions vary widely—so do coolant handling problems. To prevent costly coolant spoilage with its foul odors and to maintain practical sterility, your Dolge Service man is prepared to render this service:

He will take samples of your coolant for free bacteriological and chemical examination in Dolge laboratories.

You will receive a complete confidential report, including the bacterial count.

Only then, and when found necessary, the particular DOLGE STERIDOL GERMICIDE to fit your requirements will be recommended. Employed as directed, the preparation will not irritate the skin or corrode metals . . . and it will prevent spoilage . . . at the cost of less than 1 cent per gallon of coolant.

Write for
"Cutting Oil Sanitation"

STERIDOL
THE C. B. DOLGE CO.
WESTPORT, CONNECTICUT

Asbestos Gloves for HOT Jobs

INDUSTRIAL 210-L

There's a *BIG* difference between asbestos gloves, and you can *tell* the difference when you get Industrial's 210-L asbestos gloves. The quality stands out — in the sturdy, close-woven asbestos cloth . . . Underwriters' grade . . . from the best mills in the United States. The quality stands out when you get 210-L *in* your hands and *on* your hands. Check the seamless, one-piece quality construction, no seams at the wrist or working edges to pull out or burn out on a hot job just when protection is needed most. The quality stands out also in the careful design and proportioning, in the big roomy cut, in the loose, airy comfort, in the fleece cotton lining that's anchored in each finger and thumb and won't pull out.

Thorough inspection at every step of manufacture doubly insures dependable protection, makes them veterans of rough, tough service. Get Industrial's 210-L and you will see what 39 years of experience and know-how mean in low-cost dependable protection. Standard 11, 14 and 23 inch lengths. Other lengths and many *special types* of asbestos gloves and mittens are available.

Write for Catalog. We are designers and manufacturers of a complete line of safety clothing. Tell us your requirements.

Industrial
GLOVES COMPANY
A CORPORATION
Main Factory: 1808 Garfield St., DANVILLE, ILLINOIS
(In Canada: SAFETY SUPPLY CO., Toronto)

Points To Remember In Flame Cutting And Welding

From Page 17

sq. inch as the limiting pressure on free acetylene.

Naturally, as with any other combustible gas, acetylene when mixed with air or oxygen in proper proportions and ignited, will explode. It is so active chemically that *the explosive range of these mixtures is very wide, probably the widest of any gas you will use.* It ranges from about 2½ per cent acetylene and 97½ per cent oxygen, at the lower limit, to about 83 per cent acetylene and 17 per cent oxygen, at the upper.

Flame Facts

Now let us consider the flame itself as it affects safety. The safety of the final product which is being welded is not being discussed here—that would cover too wide a field—only the safety of the process.

A flame may start a fire directly by striking combustible material. The oxy-acetylene flame is a hot one and there is no time lag before such materials will ignite. When we speak of flame we also mean heat which may not cause a visible flame. Here again we find that fires can be started from sparks, molten metal, slag and heated objects that have been welded or cut, unless proper safeguards are applied. High temperature flames may also cause fumes from the materials being welded or cut, as well as from the products of combustion. Fortunately the health hazards present in these applications are easily recognizable and readily avoided.

Metal Poisoning

A workman may be affected by heating certain metals as products, if there is inadequate ventilation and other protective measures. Such conditions can exist regardless of the type of flame or heat used.

Zinc is a metal which can produce harmful fumes. So called zinc "chills", also found in brass foundries and other such establishments, is self limiting. Usually the sufferer throws it off within 24 hours and has no permanent ill effects. Workers vary in their susceptibility to

Proved in Safety Programs by leading Industries . . . you can

CLEAN MORE FASTER, AND AT LOWER COST

with

HOFFMAN

HEAVY DUTY VACUUM CLEANING SYSTEMS

Plant cleaning takes less time and manpower — is done more thoroughly with Hoffman vacuum cleaning equipment. Higher suction — larger dust storage — bigger filtering area permit more cleaning (walls, overhead and machinery. as well as floors) with less time out for disposal. The proven, modern method for eliminating hazardous dust conditions — with big savings that result. Portable units and stationary systems to fit your plant. Write *now* for a FREE Survey.

NEW AND OUTSTANDING
HOFFCO-VAC #30 PORTABLE

This new 3 h.p. portable has features previously obtainable only in larger models. Large bag filtering area. 4.4 cu. ft. dust container, and other new advantages. Built for heavy-duty, continuous service. Write for Bulletin A-752.

HOFFMAN ALSO BUILDS MULTISTAGE CENTRIFUGAL BLOWERS AND EXHAUSTERS
WRITE NOW FOR LITERATURE

U. S. HOFFMAN
MACHINERY CORPORATION
AIR APPLIANCE DIVISION
98 EAST 12TH ST., NEW YORK 3; N. Y.
CANADIAN PLANT: NEWMARKET, ONT.

these fumes, and daily exposure may result in an immunity to them.

Lead is a serious and insidious poison, one that must be avoided or protected against in all industries. Preferred protection is a supplied air respirator with air coming from an uncontaminated source. As lead poisoning leaves a cumulative effect and may appear long after the exposure, no one can afford to take chances with it. This applies, not only to lead itself, or to lead coated parts, but also to working on materials that have been coated with lead. The same is true of cadmium which is not so frequently met with in industry. Some fluxes for certain work—such as welding aluminum—contain fluorides and give off fluorine which is quite irritating. These fumes must be vented without exposing workers.

Working In Confined Areas

Other than this, when a man works in a confined space—such as the inside of a tank—even though no poisonous material is present, air must be supplied in proper quantities. It is always somewhat better to ventilate by suction rather than to supply air under pressure; but the latter, when properly done, will avoid the hazard. Under certain conditions, a supplied air respirator may be desirable. When working in confined quarters it is well to remember that flame requires a great deal of oxygen and produces a great deal of carbon dioxide. It also generates considerable heat: all of these factors must be taken into consideration when designing proper ventilation which is the real answer to the problem.

The most important phase of protective work in oxy-acetylene applications is fire prevention. In this regard we have not been nearly as successful as we have in the prevention of accidents. This is not due to lack of diligence on our part, but to hazards inherent in any process which involves the use of high pressure flames and the consequent risk of exposing combustible materials to the hazard of ignition.

This danger is especially present where the welding flame is used in maintenance work in places not specifically safeguarded for hot work. Every worker should be thoroughly informed on safety regulations and extra attention must be given to welding or cutting operations which must be handled in temporary, incompletely equipped facilities.

It is a safe rule of fire prevention to *never allow the use of high pressure gas flames in a place where a flame of any kind should be forbidden.* This appears to be simple, but people take chances: analysis of fires caused by welding mistakes shows a large preponderance are due to improper use of *portable* equipment. When used in continuous production, oxy-acetylene work can be properly safeguarded. The trouble starts when it must be applied at random throughout the plant.

We find also that a larger number of fires start in cutting processes than in welding. By the record, you should be able to produce fastest fire safety results by checking cutting operations in locations that have not been set apart and specially safeguarded.

GARDWELL Products

PERSONAL PROTECTION

.....from Recommended Materials

No. 760

. . . **Gardwell Underwriters Grade Asbestos Suits**

Made from selected close woven Underwriters Grade Asbestos Cloth the jumper suit illustrated is reinforced with special chrome tanned heat resisting leather. Collars are of wool. Snap fasteners are used in front for safer, quicker removal. Seams are double sewn.

No. 1744

. . . **Gardwell Underwriters Grade Asbestos Gloves.**

Where heat and flame are the chief hazards asbestos clothing, gloves and mittens are supreme. GARDWELL asbestos clothing includes everything from a complete suit with helmet, gloves, coverall, etc.

No. 500

. . . **Gardwell Underwriters Grade Leather**

For rough service in protection from sand, steel shot, electric welding, etc. you can't beat GARDWELL leather leggings, welding jackets, sleeves, clothing, etc. The GARDWELL "Frank" Knee Legging illustrated is a favorite in thousands of plants all over the country.

. . . **Gardwell Underwriters Grade Asbestos Mittens**

This special pair type mitten is 14" long. High grade chrome leather reinforcement on the palm and thumb extends about an inch onto the back thus reinforcing all seams. The reinforcement on the thumb also covers the back to protect the thumb seams. Has woolen lining, made large for quick removal.

No. 116

Also items from GARDWELL Ply-Garb, Oil-Chem, Canvas, Fireproofed Duck and Rubber—all made from highest quality materials, by expert workmen and backed by over 25 years experience. Send for Catalog.

Safety CLOTHING AND EQUIPMENT Co.

7016 EUCLID AVENUE CLEVELAND 3, OHIO

PHONE ENDICOTT 1722

INDUSTRIAL
Accidents in the News . . .

These accidents are taken from the pages of the nations Newspapers. They've all happened—they didn't have to!

Erie, Pa., Times:

A fellow employee saved the life of a grinder this morning at the Dunn Brick Works. But before the gears of a grinding machine were shut off, Herman J. Dean, Jr., 28, had lost his right leg. Nick Salvatore rushed to the rescue of Dean, whose trousers caught in the gears of the machine. Dean's right foot and calf had been pulled into the machine almost up to the knee before Salvatore pulled the main switch, shutting off the machinery. An ambulance surgeon amputated just below the knee at the scene, and Dean was rushed to St. Vincent's hospital where his condition is described as serious.

Prevention:

When working at any kind of machinery, attention must be taken to prevent loose or floppy clothing from coming in contact with moving parts. Close fitting trousers and shirt sleeves, no key or watch chains, no neckties: these are the primary rules for safe work clothing. There are several types of clips available to keep trouser cuffs bound closely at the ankle, and out of harm's way.

◆

Kansas City, Missouri, Star:

Lynn Jenkins, 26 years old, of Shawnee, suffered the loss of three fingers of his right hand in an accident today at the J. P. Gilman Granite Company, Fairfax industrial district. Jenkins was taken to St. Margaret's hospital.

An employee of the company for two months, Jenkins was doing maintenance work about the plant and was using the track of a 20 ton crane for balance. The crane operator failed to see Jenkins' hand.

Prevention:

Whenever possible, maintenance work should be done at times, and in places, where it will not interfere with normal plant operation. Accidents can't happen if their component factors are kept separated. In cases where such work must be done in potential danger areas, the crane operator must be warned that men are busy along his pathway—and he should be instructed to pass this, and any other special orders along to his relief man—so that extreme caution can be exercised in his regular duties.

"Fender prongs," or other guard devices installed on the crane wheels, would have picked the hand up, instead of crushing it. A loud horn or bell signal should be part of any moving equipment's standard safety rigging; so that workers can keep out of its way.

◆

Pittsburg, Kansas, Headlight:

William H. Coslet suffered a broken left leg when a steel boom he was helping to load on a freight car slipped and fell on him. The accident occurred late yesterday in the Arcadia yards of the Frisco Railroad where Mr. Coslet is employed. Attendants at Mt. Carmel hospital where he was taken for treatment reported today that his condition is satisfactory.

Prevention:

It is the duty of the foreman, or job superintendent, to see that safety regulations are adhered to. When loading heavy materials, special care must be taken to see that loads are securely fastened, and that workers stay clear of moving or suspended loads. If mechanical material handling equipment is not available, the foreman should be in a position to view the entire operation and should see to it that he has plenty of help on the job. Hand or voice signals should be pre-arranged to assure cooperative effort by the workers.

◆

Springfield, Mo., Leader & Press:

James P. Cheffey, 36, was electrocuted last night in a power line accident on route 97; and a co-worker, Joe Peck, was shocked, although not apparently seriously injured. Cheffey and Peck, employees of the John Dennon and Sons Company, were placing steel girders on a bridge that spans Spring River. They were standing in a muddy creek bed and were attaching the beams to a cable on a hoist when the top of the derrick with which they were working with brushed against a high tension power line; the shock sped down the cable and into the steel beams. Reached at her home, Mrs. Peck said that her husband had been hired about six months ago as a truck driver, but that he and Cheffey "did 'most anything there was to do."

Prevention:

Before starting any work, the man in charge of such operations should make his number one job that of scouting the work area for possible hazards. Literally hundreds of similar accidents occur annually: they are all due to the lack of preparatory investigation. When power lines, obstacles or other hazards must be considered, the work superintendent should make sure that the crane operator is warned and that a method of avoiding them is decided upon.

As added insurance, installation of mechanical protection, such as electronic warning devices, or non-conductive hoods, will do much towards eliminating this type of accident.

TECHNICAL FILE ON SOLVENTS

SAVE THIS VALUABLE REFERENCE MATERIAL: BUILD UP A PERMANENT OFFICE FILE

E 67. CHLORINE POISON WARNINGS. In general this poisoning is most quickly noticeable when the damage is to the nervous system from absorption by inhalation. Such impairment is characteristic of the chlorinated solvents that are more readily soluble in water: for example—methyl chloride and methyl bromide. The signs to look for are: headache, weakness of the legs or general fatigue, dizziness, nausea, stupor. In vapor exposures of the relatively insoluble solvents, like chloroform or carbon tetrachloride, deep anesthesia or coma can be the immediate or delayed result of exposure to strong concentrations. Smaller concentrations do not show narcosis symptoms until considerable damage has been done to the internal organs. Possible early signs of this damage may be abdominal pain, nausea and vomiting: one or more of these precedes final prostration. These solvents can also be irritant poisons to the skin, eyes and membranes, especially to hyper-sensitive workers. Eczema and boils are frequent signs of poisoning by chlorinated substances which are solids at normal temperatures (naphthalene and tars.)

E 68. CONTROLS AND TREATMENT. The control feature to be stressed here, aside from the need for exhaust systems, cool work places and correct ventilation, is the result of the *delayed poisoning action* that characterizes some of these exposures and the need to watch *individual susceptibilities* even in so-called safe exposures. Efficient first-aid or prompt medical care, while all-important, may come after fatal damage has been done, especially to a worker below par physically. Therefore, *periodic examinations* to observe reactions to even low concentrations of solvent vapor can be life-savers. *Periodic inspections* of equipment and work areas will curb the serious health hazards caused by improper use and applications.

E 69. CARBON TETRACHLORIDE. CCl_4 also known as per- and tetrachloromethane and as benzineoform, is prepared for commercial use under trade names such as Carbon Tet, Carbona, Pyrene and Tetra. It is a light, colorless liquid that evaporates readily, giving off heavy, rather sweet-smelling vapors whose relative density to air is 5.3. It is one of the chlorinated solvents not soluble in water and, therefore, its main harmful effects, when inhaled, are upon deeper organs of the body. The most characteristic damage is a fatty degeneration of the liver. Other common injuries are inflammation of the heart muscles, kidney disease and organic damage to the nervous system. Such action can develop over a long interval of even mild exposures.

E 70. CONCENTRATIONS. U. S. Public Health Service suggests safe concentrations to be less than 100 ppm, but individual differences in susceptibility must be watched for. Inhalation of the vapors may irritate mucous membranes of the air passages. Contact may harm the eyes or rob the skin of protective fats, opening the way for a dermatitis.

E 71. SYMPTOMS. The usual symptoms of harmful exposure to carbon tetrachloride are headache, abdominal pain, paleness, vertigo, air-hunger, nausea, vomiting, mental confusion, impaired reflexes, digestive disturbances and other signs of drunkenness usually seen in alcoholics. Convulsions and stupor are frequently reported stages. Poor health, low calcium diet, alcoholism, are said to hasten the development of degeneration, increasing the narcotic tendencies of this solvent. Jaundice is a frequent result of chronic liver poisoning, as are loss of weight and secondary anemia.

E 72. USES. The use of carbon tetrachloride is mainly in degreasing, dry cleaning, dissolving waxes, gums, resins and as a fire extinguisher preparation. Phosgene gas and hydrochloric acid can be released in this last-named use: spraying fires with the solvent in cramped quarters is dangerous. Exposed workers include:

- Airplane-dope workers
- Burnishers (metals)
- Cementers (rubber)
- Chlorinated rubber makers
- Cobblers
- Core makers
- Degreasers (metals and textiles)
- Glue workers
- Mixers (rubber)
- Painters
- Paint makers
- Printers
- Pyroxylin-plastics workers
- Scourers (metals)

TECHNICAL FILE ON SOLVENTS

Dippers (rubber)
Dry Cleaners
Electroplaters
Fullers (textiles)
Shoe factory workers
Soapmakers
Vulcanizers
Waterproof-fabric makers

E 73. PREVENTION AND TREATMENT. Typical exposures of a harmful nature frequently may be overlooked in superficial examinations. In most instances, small quantities of the solvent are involved, yet dangerous disability and even death can result from continuous exposures and poor ventilation. Any signs of intoxication or abnormal behavior should be reported to a doctor. Instruction in the care and handling of the solvent should be posted. Workers should be rotated frequently and put on non-alcoholic, high calcium diets. Wherever solvent processes can be isolated or enclosed, general safety for all workers increases.

E 74. ACUTE POISONING. Poisoning in which the worker is overcome quickly by high concentrations of vapors is not frequent in industry. Rescue work in such cases follows the usual procedure of removal of the victim to fresh air by gas mask equipped first aid squad. A doctor should be on hand as quickly as possible, as heart failure is frequent. Artificial respiration by the prone breathing method is called for if breathing has stopped. The victim, upon revival, should be kept warm and reclining, even if he thinks he feels well enough to get up. Only a doctor can measure the extent of the damage, which *may not take final effect until hours later.* Hospitalization is recommended for *all* cases, however mild.

E 75. METHYL AND ETHYL CHLORIDE. These compounds, methyl, ethyl bromide, and the iodides, all have somewhat similar effects on the exposed worker. They decompose within the body into the alcohols (methyl and ethyl) and the halogen acids, like sodium chloride and bromide. Absorption usually is that of reactive vapors and may continue as long as exposure continues. Symptoms are delayed and are the usual ones of deep anesthesia: headache, weakness, drowsiness, nausea, mental confusion and stupor preceding death from respiratory failure. First aid should include oxygen-mixture administration for breathing relief. Recovery tends to be complete, but insomnia may be a lingering after-effect.

E 76. PREVENTIVE MEASURES. Industrial exhaust ventilation controls are not too important a consideration here since the danger is usually from leaks or sudden accidental exposures. Inspection and maintenance of equipment are the major preventive measures. Methyl chloride is used mainly as a refrigerant and as an extracting agent for essential oils; the other halides are used as fumigants and in the chemical, dye, drug and perfume industries. If work rooms are suspected of exposure, air tests should be made and *concentrations kept below a suggested 50 ppm for methyl and ethyl bromide, 240 ppm for methyl chloride and 2000 ppm for ethyl chloride.* First aid instructions should be posted in work rooms wherever possible.

E 77. DICHLOROMETHANE. CH_2Cl_2 is also called methylene chloride and methylene dichloride and is used in industry as a fat, oil, rubber and silk solvent, a refrigerant, a degreaser, dry cleaner, and as a paint remover constituent. It is slightly water-soluble, colorless, and has an odor like ether. It is not as much of an anesthetic as chloroform (trichloromethane), but when anesthesia does set in death follows quickly. *A safe limit of 288 ppm has been suggested.* The solvent's vapors coming in contact with hot metal will decompose to form phosgene and other dangerous gases, creating a hazard in confined places. In general this liquid is considered one of the less harmful of the chlorinated hydrocarbons used in industry, but ventilating precautions similar to those recommended for carbon tetrachloride should be taken.

E 78. DICHLOROETHANE. This liquid is also called ethylene chloride, is colorless with a rather pleasant odor, resembling chloroform. It is also slightly soluble in water, and therefore *has some irritant effect on the mucous membranes that acts as a warning* while concentrations are still relatively safe. A maximum limit of 100 ppm has been suggested for the vapors, for prolonged exposures. In severe exposures its anesthetic action is similar to chloroform, but its chronic poisoning effects resemble those of carbon tetrachloride, the kidneys being attacked particularly. A distinct toxic effect reported is a cloudiness of the cornea of the eye, obstructing vision. Treatment, prevention and control methods are similar to those for carbon tetrachloride.

Useful Literature

The publications listed below are available without charge. Simply circle the number of the items desired on the postage-free reply card bound in this issue and mail it.

UL-25 . . . FLOOR CARE—Every type of floor and floor surface is thoroughly discussed in West Disinfecting Company's new 32-page booklet, *The Proper Care Of Floors.* Illustrated throughout, the booklet is prepared in two parts: part 1 covers the triple floor-preservation process; part 2 describes methods of maintenance for different surfaces.

UL-26 . . . ELECTRONIC CONTROLS—*Cutting Production Costs With Electronic Controls* is the title of Photoswitch Inc.'s collection of case studies. Handily indexed by industry and type of application, the 64-page booklet contains 45 different applications of electronic controls to protect, count, inspect, meter, warn and serve numerous other functions in any industry.

UL-27 . . . INDUSTRIAL GLOVES—B. F. Goodrich Company's recently published catalog section describes and pictures the line of industrial and acid gloves available from the firm. Complete specifications are given for each glove type and the uses for each type are outlined. Included are light and heavy gauge, gauntlet, rough surface, coated-canvas and other types of gloves.

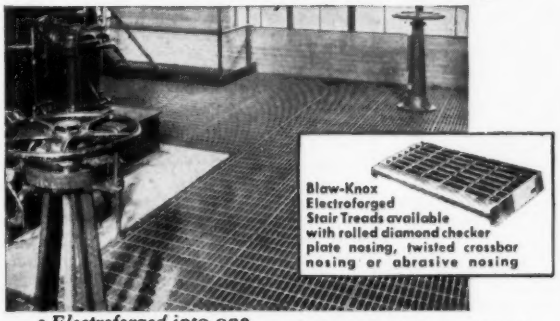
UL-28 . . . EYE CARE PROGRAM—American Optical Company has published a brochure giving step-by-step directions in the establishment of industrial eye care programs. Entitled *"How To Set Up And Conduct A Safety RX Program,* the booklet gives background information on formulation of company policy, as well as detailed program data.

UL-29 . . . COLD RELIEF—Complete information on Anahist, antihistaminic drug developed for cold prevention and relief, is offered by the Anahist Company. Available to safety directors and hygienists, the material describes the drug's clinical history and gives details about special industrial packaging of Anahist.

UL-30 . . . GAUZE FABRIC — A bulletin describing the various applications of Tubegauz, Scholl Mfg. Company's seamless, tubular gauze fabric is offered. Available in various widths for bandaging the hands, arms, legs, etc., Tubegauz's many uses and a variety of package sizes are completely discussed.

UL-31 . . . STEEL SCAFFOLDS—How to put workers at the job level—safely, is the subject of Patent Scaffolding Company's new bulletin on "Trouble Saver" sectional steel rolling scaffolds. It describes and illustrates a variety of arrangements for use in repairing, painting, maintenance and other work.

the IDEAL OPEN FLOOR for every industry


Blaw-Knox Electroforged Stair Treads available with rolled diamond checker plate nosing, twisted crossbar nosing or abrasive nosing

• *Electroforged* into one exceptionally strong piece • *non-slip twisted bar* for safe footing • maximum open area • self-cleaning, with no corners to clog • easily installed • easily maintained • *adaptable* to many uses, indoors and out, for every industry.

BLAW-KNOX Electroforged STEEL GRATING

Open Flooring • Sidewalk Doors • Bridge Surfacing • Catwalks • Sidewalks • Subway Grating • Treads Many other uses

Send for BULLETIN 2296 TODAY!

BLAW-KNOX DIVISION of Blaw-Knox Company
2109 Farmers Bank Bldg., Pittsburgh 22, Pa.
Offices in Principal Cities

BLAW-KNOX ELECTROFORGED STEEL GRATING

SAVE $11.50 ON EVERY ACME "Ten Pounder" EXTINGUISHER

• UNDERWRITER ACCEPTED
• LATEST DESIGN

Buy four Acme "Ten Pounders" for the price of 3 at regular list—buy yours now and get the BIGGEST value ever offered in these outstanding 10 lb. CO_2 extinguishers. Underwriter accepted—top quality units that equal or betters every standard of construction and performance—that give you maximum fire protection for minimum cost. CO_2 smothers a fire instantly with no damage to equipment or material. Quick discharge squeeze grip valve starts and stops operation instantly. Complete with wall bracket. Fire red for easy visibility.

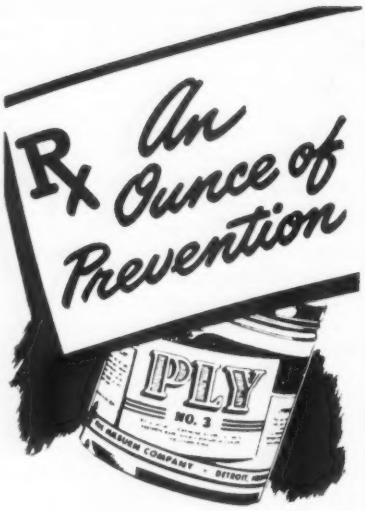
Regular List $48.00

OUR PRICE $36.50 each

F. O. B. CHICAGO

Write for our FREE 28 PAGE BARGAIN Catalog.

ACME EQUIPMENT COMPANY, INC.
128 South Clinton Street, Room 255
Chicago 6, Illinois



We Will Tell You How to Do It— *AT NO CHARGE!*

It took 16 years to get the answers for *PREVENTION* of industrial dermatitis, *BUT*, now that we have this information it can be AN OUNCE OF PREVENTION which will save hours of lost work in *YOUR* plant.

OUR SERVICE IS *Free*

The doctor in charge of our PLY laboratory and his entire staff of medical consultants and chemists are at YOUR service. You will not be billed for any consultation, diagnosis or prescription.

"THE DOCTOR IS IN"

Write to us, describing in detail materials handled, exposure and other data you consider pertinent. If samples of materials handled or added information is needed, we will request them. If necessary, we will send a field representative to make a plant analysis. You will not be billed for this service.

Free —

Ask for a copy of "The Answer to Industrial Dermatitis," the only reference book of its kind. FREE SAMPLE of PLY furnished if you supply data on exposure.

Manufacturers of PLYGLOVS and PLY-GARB Plastic Safety Clothing

THE MILBURN CO.
3245 E. Woodbridge, Detroit 7, Mich.

LITERATURE FEATURED IN ADS THIS MONTH

A-1 . . . "Dust Collecting Systems for Woodworking Plants" is offered in booklet form by the Kirk & Blum Mfg. Co.

A-2 . . . Literature on large area floor scrubbing savings is available from Finnell System, Inc.

A-3 . . . C-O Two Fire Equipment Co. has complete information on its new dry-chemical fire extinguisher.

A-4 . . . A free catalog showing the complete Hy-Test line of safety shoes is available.

A-5 . . . Dryex, the new agent contained in Buffalo Fire Appliance Corp.'s VL extinguishers, is fully described in a recently published bulletin.

A-6 . . . Wyandotte Chemicals Corp. offers information on Zorball, its all-purpose floor absorbent.

A-7 . . . A buyer's guide for safety shoe purchasers, telling how to specify for all needs, is available from Lehigh Safety Shoe Co.

A-8 . . . Thom McAn Safety Shoes offers data on their service for supplying shoes to workers, either through stores or direct to the plant.

A-9 . . . An illustrated catalog of Bennett Mfg. Co.'s waste receptacles is offered.

A-10 . . . Silver Rod Pharmacal Co. will provide posters on cold facts on request.

A-11 . . . Freeman Shoe Service will provide information on their "at your door" truck shoe service.

A-12 . . . The Inhiston Cold Control Manual is offered by Davis Emergency Equipment Co.

A-13 . . . C. B. Dolge Co. has recently published "Cutting Oil Sanitation."

A-14 . . . A handy reference, The Answer to Industrial Dermatitis, is available from the Milburn Co.

A-15 . . . Safety Notes, a pocket memorandum is available on request from the Chicago Eye Shield Co.

A-16 . . . Meili-Blumberg Corp. offers literature on its M-B Aisle Marker, explains how it may be easily converted to an all-purpose paint sprayer.

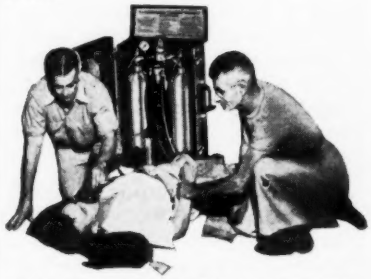
A-17 . . . Willson Products, Inc.'s new catalog contains data on safety glass, filter glass and respiratory hazards, as well as complete product information.

A-18 . . . Blaw-Knox Division provides information on Electroforged steel open flooring, and other applications of steel grating, in Bulletin 2296.

A-19 . . . A 28 page BARGAIN catalog of extinguishing and other safety equipment may be obtained from Acme Equipment Co., Inc.

CAN ASPHYXIA STRIKE WORKERS IN YOUR PLANT?

Crushing accidents . . . severe electrical shock . . . heart attacks . . . heat suffocation . . . monoxide poisoning . . . smoke suffocation . . . drowning . . . and other forms of asphyxia can strike down workers in your plant no matter what you make. Industrial experience has shown that accidents involving asphyxiation can occur despite the most carefully laid safety precautions. And when a worker stops breathing, time and death will not wait for haphazard rescue efforts.



SAVE WORKERS LIVES COMBAT DISABILITY with an E & J RESUSCITATOR

YOU HAVE A RESPONSIBILITY to protect your workers from asphyxial hazards, to prevent loss of man-hours, and to minimize company liability for death or injury.
YOUR BEST PROTECTION when asphyxia strikes is the automatic resuscitation action of an E & J Resuscitator. This life-saving instrument breathes for those who are unable to breathe for themselves. Through a face mask it introduces oxygen into the victim's lungs and exhales for him. Because it automatically adjusts itself to lung capacity, the E & J Resuscitator is as safe for a baby as it is for your strongest worker. It is light and durable . . . one person can carry . . . operates on its own oxygen power . . . is easy to use. See for yourself why this safe, efficient instrument is considered essential equipment by industries, rescue squads and hospitals the country over. Send coupon below or write for a demonstration. There is no obligation to buy but you owe it to your company to see the resuscitator in action.

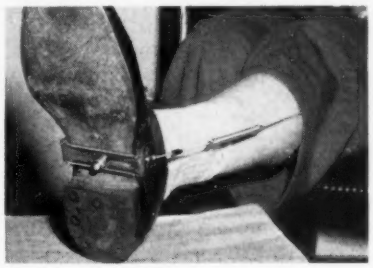
E&J *The Breath of Life*
. . . RESUSCITATOR-ASPIRATOR-INHALATOR

E & J MANUFACTURING CO.
GLENDALE 1, CALIFORNIA

To: E & J MFG. CO., Glendale, Calif.
☐ Please arrange an E & J Demonstration.
☐ Please send complete E & J literature.
name .....
title .....
firm .....
address .....

New PRODUCTS

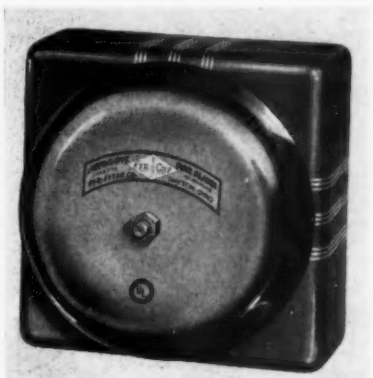
NP-1 . . . ANTI-STATIC DEVICE— Plants where combustible materials are kept can offer further personnel protection against static electricity explosions with a device recently introduced by Walter G. Legge Co. Called Nostat, the prod-



uct is a grounding device worn to overcome a shortcoming in the effectiveness of conductive floors. Human bodies represent high storage potentials for static currents, yet are easily insulated from a conductive floor by shoe soles, wax deposits on shoes, etc. This device enables conductive floors to carry off excess static electricity from the body.

For further information on this product circle NP-1 on the special postcard bound in this issue.

NP-2 . . . AUTOMATIC ALARM— The Fyr-Fyter Company has placed an automatic fire alarm on the market and claims it to be the only one



carrying Underwriters Laboratories approval. Known as the Fyr-Cry, the unit is activated by a special fuse when room temperature exceeds 133 degrees F. Once installed, the alarm requires no further attention: non-electric in operation, there is no chance of power failure. The alarm is 8½ inches sq., the mechanism being contained in a red and white plastic case. An 8 inch steel bell gives a loud gonging sound for 5 minutes once a fire starts.

For further information on this product circle NP-2 on the special postcard bound in this issue.

NP-3 . . . LADDER LEVELER — Maximum safety for ladder use on uneven surfaces is provided by a hydraulic attachment called the

Hydra-lizer. The device consists of inter - connected hydraulic units which displace oil from one leg to the other to correct terrain differences. A foot operated valve lever locks the legs in any position desired. Weighing only six pounds, the Hydra-lizer is constructed entirely of steel for loads of over 500 lbs. It can be attached to all types of ladders, automatically adjusting to the proper width for any base. Its ball and socket shoe can be flipped on end for use on ice, asphalt or soft ground, according to the manufacturer, the Anderson Products Co.

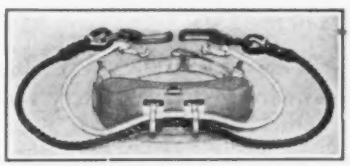
For further information on this product circle NP-3 on the special postcard bound in this issue.

NP-4 . . . IMPROVED GLOVE — Something new has been added to the Edmont Neox-coated Work Glove—the glove which, its makers claim, outwears 3 to 9 pairs of ordinary work golves on actual tests.

Now, fingers and thumbs of these oil, chemical, cutting and abrasion resistant gloves are being molded in the natural position and curvature of thumb and fingers and with a much wider span between thumb and first finger. These design improvements are claimed to give the wearer greater comfort and surer, firmer grip. Neox-coated gloves are available in knit-wrist as well as the gauntlet style illustrated.

For further information on this product circle NP-4 on the special postcard bound in this issue.

NP-5 . . . NYLON SAFETY BELT— Safe-Hi shock absorber belts employ a new material of the nylon family—unolyn—which will stretch to several times its original length under impact. This elongation

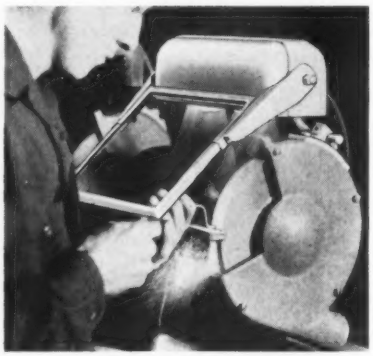


without rebound, spreads the shock of free falls and creates a minimum of stress on the man, building anchor and all belt parts. The Safe-Hi belt, manufactured by the Rose Mfg. Co., features stitched, instead of riveted fastenings; single pass,

non-slip buckles; choice of wide belt pad or 4 inch web inside waist belt; separate nylon service rope and unolyn safety rope.

For further information on this product circle NP-5 on the special postcard bound in this issue.

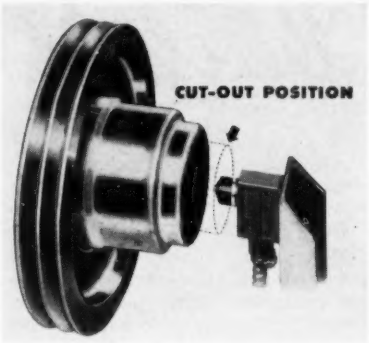
NP-6 . . . CONTROL SHIELD — Serving as both an illuminating safety shield and machine control is a new Electro-Lock Safety Shield,



product of Junkin Safety Appliance Co. Developed primarily as a point of operation guard, the shield affords good visibility (more than 60 square inches of working area) while protecting the worker's eyes and face from flying particles, sparks, etc. The light contained in the unit's housing may be focused on the point of operation, and there is no danger of lamp breakage or burns due to contact with hot lamps. The new Electro-Lock is also a control which prohibits operation of the machine unless the shield is in a protecting position. Available in a standard size—8 x 10 inches—the unit can be purchased for either 110 or 220 volt circuits.

For further information on this product circle NP-6 on the special postcard bound in this issue.

NP-7 . . . OVERLOAD CUT-OUT— A new and improved overload cut-out for all types of conveyor systems has been announced by the Anchor Steel and Conveyor Co. Known as the Junior Model Size 0, the new item will handle capacities from 20 to 150 inch/lbs., shutting off the motor instantly when conveyor or machinery is overloaded, and resetting automatically. Featuring a dust tight and drip proof case, it is splash proof as well, can be used in atmospheres containing water, oil and acid. The Junior Model 0 is furnished with either sprocket,



chain, V-belt or flat-face pulley drive members.

For further information on this product circle NP-7 on the special postcard bound in this issue.

NP-8 . . . DOOR OPENER — Low cost and adaptability without remodeling of existing installations are the big advantages of Astra Engineering Company's new automatic door-opening device. Simplified design—air operated and hydraulically controlled — eliminates extensive wiring, contact points, electronic devices, etc.; yet the

SAFETY EQUIPMENT FOR ALL INDUSTRIES

TOUGH AND LONG WEARING

IPCO NEOPRENE APRONS

. . . PROTECTION against all types of PETROLEUM PRODUCTS, ACIDS, ALKALIS AND SOLVENTS.

Used successfully by chemical plants, galvanizers, storage battery manufacturers and other industries. Write For Bulletin M-20

IPCO Safety Equipment for all Industries

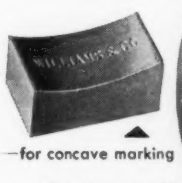
INDUSTRIAL PRODUCTS COMPANY

2830 N. FOURTH STREET · PHILADELPHIA 33, PA.

For Safe, Fast, Economical Marking . . .

"SAFETY" WEDGE GRIP STEEL HAND STAMPS

Made with two or more characters, trade mark designs, Gothic, Roman, or script style lettering to suit any requirement. Sizes from 1/64" and up. Non-spalling, non-mushrooming features assure long, safe service on all types of marking.



—for concave marking

—for convex marking

—for straight line marking

—for curved line marking

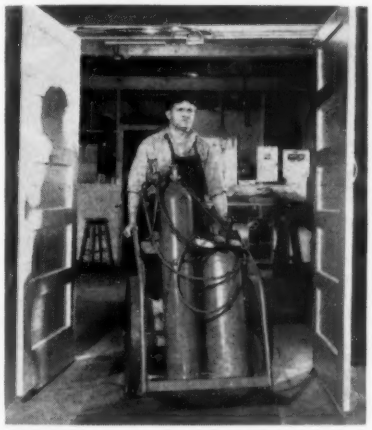
Write for quotation on your requirements.

M.E. CUNNINGHAM CO.

SAFETY STEEL STAMPS

91 East Carson Street · Pittsburgh 19, Pa.

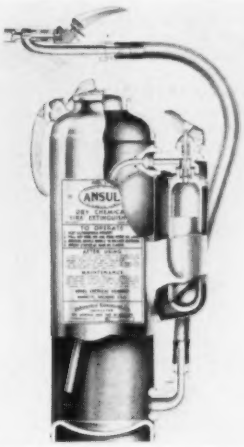
opening and closing action is fully automatic whenever someone walks on either side of equipped doors. The floor plate which governs ac-



tion is only $\frac{3}{16}$" thick with low-angle rising edges for safe, smooth approach of foot traffic and trucks. When building air supply is not available, air may be supplied by a small compressor.

For further information on this product circle NP-8 on the special postcard bound in this issue.

NP-9 . . . EXTINGUISHER — An improved model dry chemical extinguisher, said to be completely water-tight, has been introduced by Ansul Chemical Co. Incorporating 12 new design features, the unit—Model B—is the product of 10 years' experience in the dry chemical field. Chief among the new features are special nozzle and receiver seals which make them water-tight, threaded hose connections, new cartridge guard finger grip and redesigned carrying handle. The Ansul Model B extinguisher is available in both 20 and 30 lb. sizes.



For further information on this product circle NP-9 on the special postcard bound in this issue.

Industrial
BURN CASES
Slow and Non-Healing WOUNDS

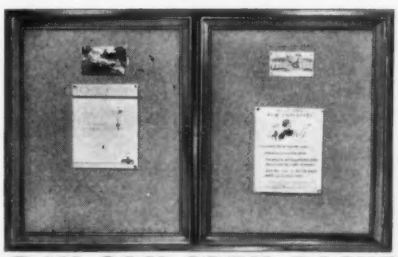
Usually respond quickly to

DIONOL

OINTMENTS

Dionol Ointments melt at body temperature for almost immediate effectiveness.

Write for samples
DIONOL PHARMACAL COMPANY
Ferndale 20, Michigan



DAV-SON CORK-BACKED BULLETIN BOARDS

DAV-SON indoor and outdoor style Bulletin Boards provide attractive displays for up-to-the-minute announcements and posters. Your choice of hardwood or metal frames, with or without locking glass doors, illuminated or non-illuminated.

SAFETY
FIRST
YOU CAN USE THIS CHANGEABLE DISPLAY FOR SAFETY FIRE HAZARDS CLEANLINESS PLANT ACTIVITIES AND MANY OTHER MESSAGES

"THE SAFETY DIRECTOR"

Flashing display is a constant warning to employees to avoid accidents. Changeable letters permit timely safety messages to be set up as often as required. Definite improvement in safety records has been noted in plants using "The Safety Director."

Write for complete information regarding DAV-SON — Cork Bulletin Boards and Directories and the famous "Safety Director."

Ask for Bulletin "B"

DAV-SON

A. C. DAVENPORT & SON, INC.
ESTABLISHED 1932
311 N. DESPLAINES ST., CHICAGO 6, ILL.

Stanzoil Light Weight RSW-13's

Tough, Sheer... Sure Grip on Oily Parts

These new improved light weight Stanzoil RSW-13's are designed especially for handling small parts in testing and assembly, food products packing, etc. Shaped to fit the fingers naturally in gripping position, more hand comfort over long periods of wear. Finger tip gauge cut to .018 for greater sensitivity. Non-slip grip aids precision workers, speeds action. Your plant shows more productivity when employees aren't fumbling with thick, unwieldy rubber gloves. Write today for complete *Stanzoil* catalog.

Synthetic Rubber Division
The Pioneer Rubber Company
638 Tiffin Road Willard, Ohio, U. S. A.
Los Angeles, California

STANZOIL BY PIONEER

OVER *30 Years* OF QUALITY GLOVE MAKING

SAFE FLOORS!

At last! A hard, long wearing finish with high gloss and MAXIMUM SLIP RESISTANCE!

CONTAINS ABSOLUTELY NO WAX

Accidents due to falls on waxed floor surfaces have long been a serious problem in business and industry. No-Slip, a thoroughly tested floor coating, now overcomes this problem and provides a safe, lustrous finish which is easily applied and inexpensively maintained.

Write today for free demonstration kit and literature.

TIME-SAVING SPECIALTIES
706 New York Life Building, Dept. 1
MINNEAPOLIS 2, MINNESOTA

Guide Pin Covers

PROTECT OPERATOR AND GUIDE PINS

Effectively guard against injury to operator, die and press on operations where bushings leave the guide pins. Protect pins and bushings from chips and dirt when entire pin and bushing are covered. Inexpensive, easy to attach.

Felt Oiler Ring in top units provides POSITIVE lubrication.

WRITE TODAY FOR DESCRIPTIVE FOLDER AND PRICE LIST

Name _____

Address _____

Title _____

Wiesman Manufacturing Co.
33 South St. Clair Street • Dayton 2, Ohio

ADVERTISERS' INDEX

Acme Equipment Co., Inc. 43
American Optical Co. 11
Ansul Chemical Co. 33

Bausch & Lomb Optical Co. ..Inside Back
Bennett Mfg. Co. 29
Blaw-Knox Co. 43
Bristol-Myers Co. 3
Buffalo Fire Appliance Corp. 34

C-O Two Fire Equipment Co. 6
Chicago Eye Shield Co. 1
M. E. Cunningham Co. 46

A. C. Davenport & Son, Inc. 47
Davis Emergency Equipment Co. ..10, 30
Dionol Pharmacal Co. 47
Dockson Corp. 27
C. B. Dolge Co. 37

E & J Mfg. Co. 44

Finnell System, Inc. 4
Freeman's Shoe Service 32

Hy-Test Div., International Shoe Co. .. 7
Hood Rubber Co. 37

Industrial Gloves Co. 38
Industrial Products Co. 46

Jackson Products Co. 28

Kirk & Blum Mfg. Co. .....Inside Front

Lehigh Safety Shoe Co., Inc. 12

Meili-Blumberg Corp. 37
Milburn Corp. 44

Olympic Glove Co. 48

Packwood Mfg. Co. 35
Pioneer Rubber Co. 47

Safety Clothing & Equipment Co. 39
Searjeant Metal Products Co. 48
Silver Rod Pharmacal Co., Inc. 31
Stonehouse Signs, Inc. 2

Thom McAn Shoe Co. 15
Time-Saving Specialties 48

Union Pharmaceutical Co. 8, 9
U. S. Hoffman Mfg. Co. 38
U. S. Safety Service Co. 31

Wash-Rite Company, Inc. 32
Wiesman Mfg. Co. 48
Willson Products, Inc. 23
Wyandotte Chemicals Corp. 36

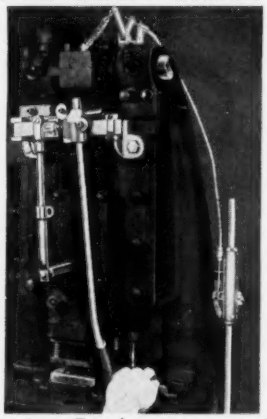
SOUP'S ON

From Page 25

flashback fires—it dehydrated and dissipated itself.

Extinguishing agents of this and similar types are especially valuable in preventing fire loss where flammable liquids are stored, shipped or processed. This mechanical foam shows promise of cutting engineering and installation headaches, taking advantage of economies in water supply and drainage design.

Protect Your Operators ALL WAYS with *Searjeant* Punch Press SAFETY GUARDS



Sweep type Guard sweeps across feed area on downward stroke of ram. Once installed nothing need be removed while making press adjustments —complete guard unit swings to one side. Available with or without automatic tally or reset counter. Shield for guard arm at no extra cost. Send for Bulletin 125.

Single trip or Non-Repeating Mechanism (fits in clutch operating rod) guards the operator against the hazard of the press repeating if he fails to release the clutch operating rod before the cycle completes. Send for Bulletin 549.

FITS ANY PRESS • 30 DAYS' TRIAL

Searjeant Metal Products, Inc.
Dept. O Box 101, MENDON, N. Y.

PRODUCTION GOES UP!
COSTS GO DOWN!

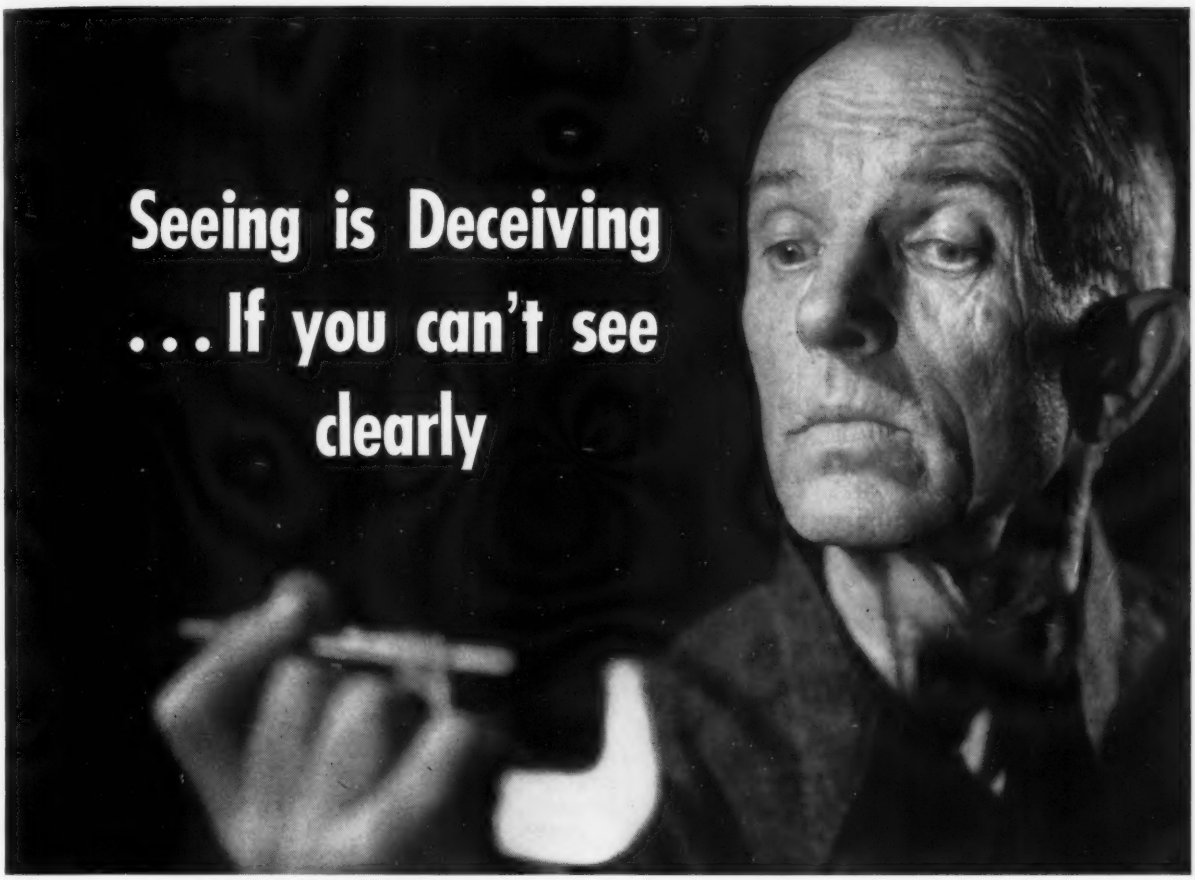
when you protect your workers with

OLYMPIC GLOVES

This plain canvas glove (#1800) is "Olymized", a process which makes gloves so treated outlast ordinary untreated gloves by as many times as 3 to 1 or 9 to 1, depending on the job. Will not peel or crack, non-slippery, non-toxic. Washable; retains its softness and flexibility. Also made with long and short cuffs. Remember . . . Olympic has a glove to fit every job!

FREE *Illustrated Catalog of Safety Work Gloves, Finger Protectors and Safety Apparel Sent to Business Organizations on Request.*

OLYMPIC GLOVE COMPANY Inc.
95 Madison Ave., Dept. 16, New York 16, N. Y.



EYE SAFETY is a TWO-IN-ONE program

Faulty vision not only hinders an employee's working efficiency, but it impairs his safety. In your plant no less than 50% of workers need eyesight correction if they are to see clearly—and safely. That's why every eye safety program should be built on the basis of *protection plus correction.* Industrial eyewear with correction lenses, professionally-prescribed, will improve your safety record and your production record. Call on your Bausch & Lomb distributor for prompt prescription service on industrial eyewear.

Write for a copy of the Bausch & Lomb catalog on industrial eyewear. It includes a highly informative discussion of the theory and design of protective industrial eyewear. It also describes the complete line of Bausch & Lomb Occupational Eyewear, the eyewear built to the highest quality standards in the industry. Bausch & Lomb Optical Co., 745-N St. Paul St., Rochester 2, N. Y.

BAUSCH & LOMB *Safety Eyewear*

YOU REACH MORE THAN....

20,000 AUTHENTICATED BUYERS

WITH THE

CERTIFIED BUYING POWER PLAN

✓ **ACTIVE BUYERS**

✓ **INCREASED SALES**

✓ **PRODUCT INTEREST**

✓ **LOWERED SELLING COSTS**

✓ **COMPLETE MARKET COVERAGE**

OCCUPATIONAL HAZARDS' "C. B. P." Plan identifies its more than 20,000 readers as authenticated, active BUYERS. The identity of each reader as a "CERTIFIED" buyer is validated by 31 selected safety equipment distributors located in key marketing areas. These distributors subscribe to OCCUPATIONAL HAZARDS for their active customers and best prospects. The distributors pay for each subscription. OCCUPATIONAL HAZARDS' more than 20,000 jobber-authenticated reader-buyers become more than just circulation . . . they represent the known potential national market for safety equipment. This makes OCCUPATIONAL HAZARDS the REAL sales link between the safety equipment manufacturer and his prospects.

OCCUPATIONAL HAZARDS' Controlled Circulation Audit guarantees QUANTITY distribution by industry and by individual. Under CCA the "CERTIFIED BUYING POWER" Plan guarantees that each reader also is an authenticated, active buyer. The safety equipment distributor, as subscriber for his own best customers, acts as the authenticating agent.

Thus, under "C. B. P." OCCUPATIONAL HAZARDS reaches more than just names, or titles, or companies . . . it reaches known, identified BUYERS. Here is the Number 1 buying audience to whom you must tell your story.

Other "C. B. P." magazines published by the Industrial Publishing Company are FLOW, for the material handling equipment field, INDUSTRY and WELDING, for the welding equipment and supply field, APPLIED HYDRAULICS, for the hydraulic and air circuit engineering field, and COMMERCIAL REFRIGERATION AND AIR CONDITIONING, for the air conditioning and refrigeration equipment field. Send for our booklet: "The 'C. B. P.' Plan . . . A New Dimension Added to Standard Magazine Audits."

OCCUPATIONAL HAZARDS

1240 ONTARIO STREET - CLEVELAND 13, OHIO